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**P R O C E E D I N G**

1  
2 PRESIDING OFCR. SCOTT: Okay. Good  
3 morning. We'll start with a couple of  
4 administrative issues. So, we do have a motion  
5 from the Applicant to allow Mr. Will to call  
6 in, instead of in person. Is that correct,  
7 Mr. Needleman?

8 MR. NEEDLEMAN: It is. I apologize  
9 for the last-minute filing. We thought we had  
10 filed that motion earlier and realized last  
11 night that we didn't.

12 PRESIDING OFCR. SCOTT: So, before I  
13 rule on that, are there any objections?

14 *[No verbal response.]*

15 PRESIDING OFCR. SCOTT: Okay. Motion  
16 is granted. Also, I just want to confirm for  
17 myself. So, for your order of presentation,  
18 so, obviously, we'll finish with Mr. Raphael,  
19 who is already at the panel. And, then, you  
20 will do, correct me where I go wrong,  
21 Mr. Stevenson and Mr. Will, by phone, of  
22 course?

23 MR. NEEDLEMAN: Correct.

24 PRESIDING OFCR. SCOTT: And, then,

1 we're going to interject Mr. Thurber, is that  
2 the intention?

3 MR. NEEDLEMAN: It is.

4 PRESIDING OFCR. SCOTT: Okay. And,  
5 then, we'll go back to Mr. Kenworthy, assuming  
6 we're still here.

7 MR. NEEDLEMAN: Yes.

8 PRESIDING OFCR. SCOTT: Okay. All  
9 right. Thank you. And I do notice we also  
10 have your response to the data requests?

11 MR. NEEDLEMAN: You do. And I have  
12 copies here for everybody.

13 PRESIDING OFCR. SCOTT: Okay. So,  
14 those have been -- does the Committee have  
15 those?

16 MR. IACOPINO: Yes, it's been passed  
17 out. And we should mark it as the first  
18 Committee exhibit.

19 PRESIDING OFCR. SCOTT: Okay. So, so  
20 marked. That would be "SEC-1", is that  
21 correct?

22 MR. IACOPINO: That's fine.

23 (The document, as described, was  
24 herewith marked as **Exhibit SEC-1**

[WITNESS: Raphael]

1 for identification.)

2 [Atty. Needleman distributing  
3 documents.]

4 PRESIDING OFCR. SCOTT: Off the  
5 record.

6 [Brief off-the-record discussion  
7 ensued.]

8 PRESIDING OFCR. SCOTT: Okay. Back  
9 on the record. And I believe we left off with  
10 Counsel for the Public, is that correct?

11 MS. MALONEY: Correct. Good morning,  
12 Mr. Raphael.

13 WITNESS RAPHAEL: Good morning,  
14 counselor.

15 **DAVID RAPHAEL, PREVIOUSLY SWORN**

16 **CROSS-EXAMINATION (resumed)**

17 BY MS. MALONEY:

18 Q. I just wanted to shift gears a little bit just  
19 to wrap up a couple questions I had that were  
20 referenced in your testimony with I think both  
21 Mr. Levesque and Attorney Reimers. And I put  
22 before you Counsel for the Public Exhibits 20  
23 and 21. Twenty is from the Town of Antrim  
24 website, a Link of Interests under Natural

[WITNESS: Raphael]

1 Resources. And, 21 is part of the -- it  
2 doesn't say on it, because this is how it  
3 printed out, but part of the Town's Master Plan  
4 under "Natural Resources and Conservation".  
5 I'm assuming that, during the course of your  
6 research, you've reviewed these documents  
7 before?

8 A. Yes.

9 Q. Okay. So, the reason I bring these up is, if  
10 you look at Exhibit Number 20, under "Natural  
11 Resources" and "Links of Interest", they  
12 identify the hills and mountains of interest,  
13 including "Bald Mountain" and "Robb Mountain"  
14 and "Willard Mountain" and "Windsor Mountain"  
15 among them. And they also identify the various  
16 water references of interest, including  
17 "Franklin Pierce Lake", "Gregg Lake", and  
18 "Willard Pond". In addition, the "Trails and  
19 Protected Land", they identify, obviously, the  
20 "dePierrefeu Wildlife Sanctuary", the "Loverns  
21 Mill Cedar Swamp Preserve", and "Meadow Marsh".

22 So, in the course of your research, you  
23 reviewed these documents, correct?

24 A. Yes. We reviewed the Master Plan for the Town

[WITNESS: Raphael]

1 and, to that extent, these references.

2 Q. Okay. Do you note on the Page 2, where it  
3 talks about Meadow Marsh, down near the bottom,  
4 it talks about that its "a short trail  
5 (approximately 0.5 miles) on Town property  
6 along the wetland areas at the north end of  
7 Gregg Lake".

8 A. Yes.

9 Q. Do you notice that?

10 A. Yes.

11 Q. Is that the trail you described as a "developed  
12 road"?

13 A. No. The access to the trail was from the  
14 developed road.

15 Q. Okay. So -- but most of the trail is a trail,  
16 correct?

17 A. Yes. It's a short trail, correct.

18 Q. And do you recall during the site visit we went  
19 last winter that it wasn't plowed?

20 A. I think that sounds right, yes.

21 Q. And, with reference to Counsel for the Public  
22 21, and part of this may have already been  
23 introduced as an exhibit, I just want to turn  
24 to Page -- and I'm not going to go over

[WITNESS: Raphael]

1 testimony that was already reviewed.

2 Obviously, Attorney Reimers and Mr.  
3 Levesque brought up the fact that the Town did  
4 include the DePierrefeu Wildlife Sanctuary and  
5 Bald Mountain, Goodhue Hill, which are part of  
6 the sanctuary, Willard Pond, and the Meadow  
7 Marsh, as areas that they wanted to -- that  
8 they were -- were indicative of preserving, and  
9 they describe it as "scenic areas and views".  
10 I'm assuming you reviewed this as part of your  
11 research?

12 A. I did. I don't recall "scenic areas and  
13 views", though, being listed specifically.

14 Q. I'm referencing, I guess which would be the  
15 Page III-8 to have a discussion. I think you  
16 had this discussion with Attorney Reimers last  
17 week about Antrim scenic views, that scenic  
18 areas and views should be preserved?

19 A. Correct. But it doesn't specifically identify  
20 which scenic areas and views should be  
21 preserved.

22 Q. Right. And, just prior to that, just preceding  
23 that, it discusses the properties I just  
24 mentioned, the resources I just mentioned?

[WITNESS: Raphael]

1 A. Yes, it does.

2 Q. And I think you were of the opinion that the  
3 Town had to do more, in order to officially  
4 designate these and preserve these areas?

5 That's what you were looking for?

6 A. Yes. And I think that opinion is not just my  
7 own. It's shared by others.

8 Q. Okay.

9 A. Including your own -- your own expert, Jean  
10 Vissering, also recommended that they would be  
11 specifically identified.

12 Q. But she did identify these as areas of  
13 scenic -- of scenic resources?

14 A. But they have not been included in the Town  
15 plan as such.

16 Q. Okay. In the course of your research, is it  
17 fair to say that you -- that you discovered  
18 there really isn't one statewide process to  
19 designate resources as "scenic"?

20 A. There's not one statewide process, similar to  
21 Maine.

22 Q. Right.

23 A. But there are, within the state, areas that  
24 have been identified as "scenic".

[WITNESS: Raphael]

1 Q. Right.

2 A. Not a consistent statewide inventory of scenic  
3 resources particularly.

4 Q. Right.

5 A. Correct.

6 Q. For example, the Department of Transportation  
7 has identified scenic byways?

8 A. Correct.

9 Q. Okay. And there's no one way that  
10 municipalities use to designate scenic  
11 resources, is there?

12 A. Sure. Sure there is. I mean, identifying  
13 specific scenic resources for their scenic  
14 values, and how to protect them, or views to  
15 them, are typically found in robust master  
16 plans that want specifically to identify those  
17 views and those areas for protection.

18 Q. So, your research indicated that all of the  
19 towns in New Hampshire use that process?

20 A. No. This is a process that is evolving. But  
21 more and more towns are exercising that  
22 opportunity, because they recognize the  
23 importance of specificity in protecting those  
24 particular resources.

[WITNESS: Raphael]

1 Q. Well, what are the ramifications of designating  
2 a resource as "scenic"?

3 A. In terms of what?

4 Q. Well, what's the significance of such a  
5 designation?

6 A. Because it becomes a clearly written community  
7 standard. It provides the specificity and  
8 guidance to individuals or developers as to  
9 what specifically the Town holds dear, in terms  
10 of scenic values and scenic sites and scenic  
11 vantage points.

12 Q. Well, I think you just said a moment ago that  
13 it's a way for the town to protect those areas?

14 A. Excuse me?

15 Q. A way for the town to protect those areas?

16 A. It's one way for the town to help protect those  
17 areas.

18 Q. Okay. Did your research indicate whether or  
19 not a municipality has the authority to protect  
20 or place any restrictions on privately-owned  
21 property?

22 A. I think it's standard practice in zoning to be  
23 able to do that.

24 Q. So, the town can restrict the use of a

[WITNESS: Raphael]

1 privately-owned conservation area?

2 A. They may or may not be able to restrict the  
3 uses. They could also prescribe certain  
4 measures to guide development in those areas.  
5 Many communities, for example, are adopting  
6 ridgeline and hillside protection overlay  
7 districts specifically designed to do that. In  
8 which some of those vantage points or specific  
9 resources that are valued for their scenic  
10 qualities are identified.

11 Q. Well, like a rural conservation district?

12 A. Not necessarily a rural conservation district.  
13 It could include in a rural conservation  
14 district specific language with regard to  
15 resources within that district that warrant or  
16 are worthy of protection. But it's not  
17 sufficient to just put it together in a list  
18 without any specificity to guide that use of  
19 that list.

20 Q. So, you're of the opinion that even though that  
21 the Town was aware that, for example, the  
22 dePierrefeu Wildlife Sanctuary was conserved in  
23 perpetuity, that they needed to really do more,  
24 in order to -- and they mention it in their

[WITNESS: Raphael]

1 Master Plan and they address it on their  
2 "Natural Resources" links to their website,  
3 they needed to do more?

4 A. Well, this isn't with regard to the sanctuary.  
5 This is with regard to private lands adjacent  
6 to the sanctuary. And I think, as I said  
7 earlier last week, that, again, if the Town was  
8 concerned or there was a need to go further,  
9 they could have identified the ridges around  
10 the sanctuary, they could have identified  
11 specific mountaintops as being sensitive from a  
12 scenic perspective and views to those ridgetops  
13 as being highly sensitive and worthy of  
14 consideration. But that was not done.

15 Q. Even though they were private property?

16 A. Even though they were private property.

17 Q. All right. I'd like to, I guess, direct your  
18 attention to your prefiled testimony. Hang on  
19 for a second. Do you have it in front of you?

20 A. I do.

21 Q. I'm looking at Page 9, about midway down the  
22 page. I just wanted to ask you a few questions  
23 that there's a curious statistic here. If you  
24 look at Line 6, you indicate -- well, actually,

[WITNESS: Raphael]

1           rather Line 8, you indicate that "Of the 290  
2           identified" -- are you there?

3       A.    Yes, I am.

4       Q.    Okay. "Of the 290 identified scenic resources,  
5           only 30 have potential for visibility, and only  
6           10 are considered sensitive". Do you see that?

7       A.    Yes, I do.

8       Q.    You then say, on Line 10, "Additionally, the  
9           average viewing distance of all resources with  
10          potential visibility will be 4 or 5" -- "will  
11          be 5 or more miles, and 6 or more miles for  
12          sensitive resources, which is considered  
13          background view." Do you see that?

14      A.    Yes, I do.

15      Q.    Well, why is that relevant?

16      A.    I think it gives a sense of the fact that, you  
17          know, overall, most of the resources that we  
18          reviewed and those of concern, on average, were  
19          some distance from the Project. And that's  
20          relevant, because we're asked, both in the  
21          rules and in standard practice, to look at  
22          distance as a component of visibility and  
23          visual change.

24      Q.    But you're supposed to look at distances at the

[WITNESS: Raphael]

1 resources individually, were you not?

2 A. Well, yes, and we did that as well.

3 Q. Well, would you agree that Willard Pond is not  
4 in the background view?

5 A. I would agree.

6 Q. And Bald Mountain, at 1.5 miles from the wind  
7 turbine farm, is not in the background view?

8 A. That one single view from Bald Mountain is not,  
9 that's right.

10 Q. And Goodhue Hill is not in the background  
11 view, --

12 A. I --

13 Q. -- at two miles away from the wind turbine  
14 farm?

15 A. I'd have to go back to my thresholds to -- I  
16 think it's in the mid-ground view, as opposed  
17 to the background view.

18 Q. At 2. --

19 A. Yes.

20 Q. -- two miles away?

21 A. I believe so. I'd have to check my thresholds.  
22 Forgive me, I don't memorize all those numbers,  
23 but --

24 Q. Okay. And Meadow Marsh, at a mile and a half

[WITNESS: Raphael]

1 away from the turbines, is not in the  
2 background view?

3 A. That would be probably in proximity.

4 Q. And Gregg Lake, at 1.6 miles away from the  
5 turbine farm, is not in the background view?

6 A. That, where the visual simulation was done  
7 from, yes.

8 Q. And the White Birch Historic District, at 2.0  
9 miles from the turbine farm, is not in the  
10 background view?

11 A. I did not review White Birch Point.

12 Q. And Robb Reservoir, at 2.6-miles away from the  
13 turbine farm, is not in the background view?

14 A. I believe that's in the mid-ground view.

15 Q. At 2.6?

16 A. Yes. Again, I could check my thresholds to  
17 provide that certainty, if you like.

18 Q. Well, it's not in the background view, is it?

19 A. It's not in the background view.

20 Q. And Black Pond, at 3.2 miles away, is not in  
21 the background view?

22 A. That's correct.

23 Q. I wanted to ask you some questions about scale,  
24 since it's come up quite a bit in the SEC's

[WITNESS: Raphael]

1 decisions and -- in the previous docket and in  
2 this docket. If you could turn to Page 24 of  
3 your report. I think here you indicate, under  
4 "Visual Dominance", under Subsection (e), are  
5 you there?

6 A. I am.

7 Q. It says here that "This indicator considers the  
8 scale of the project in relation to a specific  
9 vantage point and the project surroundings, as  
10 well as its contrast with those surroundings.  
11 A project is dominant" -- "that is "dominant"  
12 is one in which the surroundings, as well as  
13 it's" -- oh, I'm sorry. "A project that is  
14 "dominant" is one in which the project  
15 characteristics are preeminent in the  
16 landscape, diminishing the visual presence and  
17 effect of other components of the existing  
18 landscape or view."

19 And I believe that was part of -- the  
20 dominant section was part of your component of  
21 visual effect?

22 A. Correct.

23 Q. And, on Page 26, you discuss the ratings of  
24 "high", "medium", and "low", and there's a

[WITNESS: Raphael]

1 description attached to each one. Do you see  
2 that?

3 A. Yes, I do.

4 Q. And the source -- what was the source of these  
5 descriptions?

6 A. They may have been derived from several  
7 different sources which have addressed  
8 dominance. We may have narrated them based on  
9 those various sources.

10 Q. So, when you say "various sources", you're  
11 talking about like BLM and --

12 A. I have a number of references throughout the  
13 report and the bibliography, which identifies  
14 visual assessment methodologies, in which many  
15 of these, if not all of these, criteria that we  
16 use are discussed.

17 The "visual dominance" piece emerged as  
18 one of the tools, among many, particularly in  
19 Maine, with which to describe "visual effect".

20 Q. So, among those sources, do you use a BLM?

21 A. BLM is certainly one, one source for  
22 information. And one of the things you'd find  
23 is that, if you look again at BLM, Landscape  
24 Aesthetics, the work of Foundations for Visual

[WITNESS: Raphael]

1 Analysis and Visual Review, which is a, you  
2 know, a landmark study, these types of  
3 considerations are standard considerations in  
4 visual assessment.

5 Q. So, these descriptions of "high", "medium", and  
6 "low" are an amalgamation of those things you  
7 referenced?

8 A. Most likely, yes.

9 Q. Okay. If you look at the rating for "high",  
10 for example, you have indicated "The  
11 visibility, contrast, aesthetic qualities and  
12 apparent scale of the project appears to  
13 significantly alter or overwhelm the landscape,  
14 potentially due to a number of factors,  
15 including the landscape's visual absorption  
16 capability, the location of the project with  
17 [within?] an important natural focal point, or  
18 the extent of change or alteration of visual  
19 patterns that result from the new construction.  
20 The character of the view has changed such that  
21 the modification now competes for the viewer's  
22 attention as a primary feature in the  
23 landscape, and it becomes a substantial element  
24 with the view."

[WITNESS: Raphael]

1           So, that description you derived from a  
2           variety of sources?

3   A.    Forgive me, I'm just looking -- checking one  
4           thing. I think that, yes, that's a general  
5           description, which, you know, is a guide, and a  
6           point of departure for the analysis.

7   Q.    Right. But you, as I understand your process,  
8           you attach numerical values to the "high",  
9           "medium", and "low", correct?

10   A.    We do.

11   Q.    And it's based upon these descriptors?

12   A.    For the most part, correct.

13   Q.    Okay.

14   A.    But other elements factor into it.

15   Q.    To your -- but that's not indicated in the  
16           report?

17   A.    Yes, it is, in fact. As mentioned, overall in  
18           our analysis, again, these tools all add up.  
19           We have, as I've explained before, a number of  
20           steps that we go through that winnow down the  
21           projects. Obviously, Willard Pond, where  
22           perhaps you're going with this, if I may, as an  
23           example, comes out with a high rating. And,  
24           again, on one level it's based specifically on

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1 a visual simulation. But, in the final  
2 analysis, in which we integrate many of the  
3 factors that are of concern in a visual  
4 assessment, we factor in other considerations.  
5 Remember the viewer effect weighs into this  
6 process --

7 Q. Right.

8 A. -- in the ultimate determination.

9 Q. But we're talking about -- okay. You're  
10 getting ahead of yourself, and you're getting  
11 ahead of me.

12 A. I'm sorry.

13 Q. So, that's fine. I know you've been there for  
14 a long time, and you've been testifying for  
15 quite a while, but I need to ask my questions.

16 So, we are going to talk about Willard  
17 Pond. In this case, though, this is the  
18 description used for "high impact", correct?

19 A. In this particular criterion, yes.

20 Q. Right. And, if I were looking at your  
21 methodology, this is where you lay out how you  
22 determine that?

23 A. Yes. It's --

24 Q. I mean, you said here --

[WITNESS: Raphael]

1 A. It's the framework.

2 Q. -- it was very precise.

3 *[Court reporter interruption -*  
4 *multiple parties speaking at the*  
5 *same time.]*

6 MS. MALONEY: Sorry.

7 BY MS. MALONEY:

8 Q. I'm wondering if you could turn back to your  
9 prefiled testimony, on Page 11 [12?]. And down  
10 at the bottom of the page, you start -- there's  
11 a discussion on scale. And, beginning on Line  
12 21, do you see that?

13 A. Yes, I do.

14 Q. And you describe that "LandWorks looked at  
15 scale in both a regional context and  
16 local/proximate context." Do you see that?

17 A. Yes.

18 Q. And you gave "two resources with potential  
19 project visibility that best exemplifies these  
20 perspectives", and you identified "Pitcher  
21 Mountain and Willard Pond". Do you see that?

22 A. Yes.

23 Q. If you turn the page, to Page 13 -- or, rather,  
24 I think on Page 12, Line 12, I think you

[WITNESS: Raphael]

1 indicate that -- no. Sorry. Strike that. You  
2 turn back to Page 13. The top paragraph is a  
3 discussion of Pitcher Mountain, and you discuss  
4 that it's "over 6.35 miles distant and it  
5 occupies a limited portion of the overall  
6 360-degree view", and then you determined  
7 that's "4.4 percent of that view". And we had  
8 a discussion about that last week, and I'm not  
9 going to repeat that.

10 But you quote -- or, on Line 5, you  
11 indicate "The breadth of this view reduces the  
12 scale relationship of the Project to its  
13 surroundings in the region, and the view from  
14 Pitcher Mountain will not be dominated by this  
15 Project". Do you see that?

16 A. Yes, I do.

17 Q. And, then, you shift to discuss Willard Pond,  
18 and you indicate, beginning on Line 10, that  
19 "the elimination of Turbine 10...and the  
20 reduction in overall height of Turbine 9  
21 combine to reduce the Project's visual presence  
22 on the lake". Do you see that?

23 A. Yes, I do.

24 Q. And, then, you indicate, on Page 14 -- on Line

[WITNESS: Raphael]

1 14, "Having spent time on Willard Pond on  
2 several different occasions, including a  
3 morning paddling the entire shoreline and  
4 spending time in various locations floating and  
5 analyzing before and after conditions using  
6 visual simulations, I came to the conclusion  
7 the Project will not be out of scale with this  
8 setting." Do you see that?

9 A. Yes, I do.

10 Q. Now, I wonder if you could turn to Page 85 of  
11 your Visual Impact Assessment. Are you there?

12 A. Yes.

13 Q. Okay. Well, you'll see that this is Table 12,  
14 indicates "Visual Dominance", this is where you  
15 recorded your analysis of dominance with regard  
16 to the ten resources, correct?

17 A. That's correct.

18 Q. And you'll note that, at "Willard Pond", you  
19 have recorded that as "high" visual dominance?

20 A. Correct.

21 Q. Okay. And, once again, the description of  
22 "high" indicates "the visibility, contrast,  
23 aesthetic qualities and apparent scale of the  
24 project appears to significantly alter or

[WITNESS: Raphael]

1           overwhelm the landscape". Do you see that?

2   A.   Not on Table 12.

3   Q.   No, just above that, under where it says  
4       "High"?

5   A.   Oh, I'm sorry. Yes. Yes.

6   Q.   And you indicate, at the bottom sentence there  
7       of that description, it says "The character of  
8       the view has changed such that the modification  
9       now competes for the viewer's attention as a  
10      primary feature in a landscape, and it becomes  
11      a substantial element within the view." Do you  
12      see that?

13  A.   I do.

14  Q.   So, and you were getting ahead of me there, and  
15      what you were saying is that, based upon, if we  
16      go back to Page 13, it was the additional  
17      findings of paddling through the pond and  
18      looking at simulations that changed your mind  
19      about scale in that regard?

20  A.   Well, they informed my decision. I wouldn't  
21      say they "changed my mind", but they informed  
22      my decision.

23  Q.   Well, you did have a rating of "high" when you  
24      actually did the analysis, correct?

[WITNESS: Raphael]

1 A. Correct.

2 Q. And you indicated that it was, back on Page 13  
3 and 14, you talked about "The immediacy of the  
4 pond, paddling and fishing doesn't typically  
5 focus or revolve around one distinct view."

6 A. So, --

7 Q. Is that not what it says?

8 A. I'm sorry?

9 Q. Is that not what it says, on Line 18?

10 A. Are you back to the prefiled testimony?

11 Q. Yes, I am. Page 13.

12 A. Yes.

13 Q. And, then, on Page 14, you indicated that, at  
14 the top, that, Line 3, that "Based on [your]  
15 circumnavigation of the pond, I came to the  
16 distinct conclusion that the visibility of the  
17 Project and/or exposure to that visibility will  
18 be limited. As one follows the pond's shore in  
19 a boat in a clockwise direction, it's possible  
20 that one would not see or notice the Project."  
21 Do you see that?

22 A. Yes.

23 Q. So, that was based on sort of your fieldwork,  
24 and it essentially contradicted your findings

[WITNESS: Raphael]

1 when you did the dominance analysis, is that  
2 correct?

3 A. Not at all. Not at all. Because, again,  
4 reading what was said under the dominance  
5 description, the narrative that you keep  
6 quoting is a generalized narrative to provide a  
7 guide for how you understand visual dominance  
8 in a general sense and can apply it. Each  
9 project has different characteristics.

10 In Willard Pond, note that I wrote  
11 "Project is visible within close proximity and  
12 will become a substantial element within some  
13 views, but is not the main element within all  
14 the views given the 360-degree angle of view,  
15 much of which does not include the Project."

16 You know, the overreliance on a single  
17 view, as in a visual simulation, is -- can skew  
18 the understanding of the project's effect on  
19 the resource. And, so, we take in more than  
20 just what the simulation shows you, more than  
21 just what one static view shows you, but the  
22 whole experience of the pond.

23 And, again, as I think I said last week,  
24 you know, the experience of paddling or fishing

[WITNESS: Raphael]

1 is not one that relies on a fixated view in one  
2 direction, nor can it, nor is it possible to  
3 passive paddle at great length and focus on one  
4 view. Sure, you can stop and float for a few  
5 minutes. But, you know, typically, people  
6 don't float in the middle of the lake or a pond  
7 for great distances. So, again, we take in the  
8 totality of the experience, the totality of the  
9 resource.

10 And, while we may find from one visual  
11 simulation that there might be a high ranking  
12 or a wide angle of view, you really have to  
13 take that into context of the entire analysis.

14 Q. You're not suggesting that you can only see the  
15 turbines from one view on Willard Pond, are  
16 you?

17 A. No. But I'm saying that the analysis tends to  
18 focus on one or two views as they're presented  
19 in the visual simulation, and the analysis has  
20 to go beyond that.

21 Q. And, even though, in order to find that there  
22 was a high dominance, you would have to find  
23 that the Project appeared to significantly  
24 alter and overwhelm the landscape, that that is

[WITNESS: Raphael]

1           undercut by your experience paddling on the  
2           pond?

3       A.   Well, again, we didn't find that it overwhelmed  
4           the landscape. As I explained a moment ago,  
5           that's in the overall general narrative for  
6           using the tool. The specific language here,  
7           and then in the summary, and in my  
8           supplemental, and in my testimony as you've  
9           cited, I think we provide a sense of how -- or,  
10          I provide a sense of how I come to my  
11          conclusion, incorporating this one factor,  
12          other five factors in visual effect, the four  
13          factors under viewer effect, to come to an  
14          ultimate conclusion.

15       Q.   Well, I get -- I get that you come to an  
16           ultimate conclusion, we know what that is. But  
17           you described your methodology as a series of  
18           steps that were all important and they all had  
19           to be done correctly, and they all had to use  
20           appropriate process, and there was  
21           transparency, and they're repeatable. And that  
22           now we have -- now you're saying that you have  
23           this process, part of it is to determine  
24           dominance, which relate to scale. But you

[WITNESS: Raphael]

1 looked at that a second time, even though your  
2 ratings were high, and, based on your field  
3 experience at the pond, you've determined it's  
4 not high?

5 A. No. I didn't -- again, in this ranking, we  
6 clearly indicate that, in certain aspects of  
7 dominance, the Project comes out with a high  
8 rating in that category. That is one of a  
9 number of categories and a number of  
10 considerations that we use in the analysis, and  
11 they add up or not, or they are integrated into  
12 a complete understanding of the resource. This  
13 is one. Nothing of what you said about the  
14 comprehensive nature of the methodology or the  
15 fact that it's repeatable changes. And, in  
16 fact, I think the transparency is clear. We  
17 didn't hide the fact that the presence of the  
18 turbines will alter the landscape, and that's  
19 what it says right here. And we use that  
20 consideration, along with several others, in  
21 this particular category, to give it a high  
22 rating, based on the key views that, you know,  
23 we were charged to look at as part of the  
24 visual simulations.

[WITNESS: Raphael]

1           But, when you extend that out to the  
2           entire resource, and you factor in other  
3           considerations in the methodology, such as  
4           viewer effect, the high rating is one of a  
5           number of other ratings which diminish the  
6           Project's overall effect, particularly on the  
7           user.

8    Q.    Okay. As you concluded, however, in the visual  
9           assessment process, on Table 12, you've rated  
10          Willard Pond "high", correct?

11   A.    We've rated Willard Pond "high" for visual  
12          dominance.

13   Q.    Correct. Now, you didn't do this analysis for  
14          Goodhue Hill, correct?

15   A.    Correct.

16   Q.    Or Meadow Marsh?

17   A.    Correct.

18   Q.    Or Gregg Lake?

19   A.    Correct.

20   Q.    Or Black Pond?

21   A.    Correct.

22   Q.    Or Robb Reservoir?

23   A.    Correct.

24   Q.    Or Franklin Pierce Lake?

{SEC 2015-02} [Day 6/Morning Session ONLY] {09-28-16}

[WITNESS: Raphael]

1 A. No. We, obviously, just did it for the ten  
2 resources that we carried forth.

3 Q. Okay. And most of those others, other than  
4 Bald Mountain, which you've rated a "moderate",  
5 most of those others are a fairly good distance  
6 from the wind turbine farm, in fact, they  
7 mostly all will be background views, correct?

8 A. From Meadow Marsh, you were the one who --

9 Q. Meadow Marsh is not -- no, I'm talking about  
10 the ones on the list.

11 A. Oh, I'm sorry. Forgive me, I misunderstood the  
12 question.

13 Q. I'm sorry if I wasn't clear.

14 A. So, again, please -- I'm sorry. So, the  
15 question again?

16 Q. So, other than Bald Mountain on this list, all  
17 of the remaining resources would be considered  
18 background view?

19 A. I believe that's correct.

20 Q. Okay. And, just for edification, it wasn't  
21 clear to me, you have a numerical rating  
22 system, correct?

23 A. Yes.

24 Q. And, right here, we just have the "low",

[WITNESS: Raphael]

1 "high", and "moderate". So, I'm assuming you  
2 assign numerical values to these first, and  
3 then translated them into "low", "high", and  
4 "moderate"?

5 A. Well, if you -- yes. At the beginning of the  
6 section, there is a guide, I believe, or a  
7 footnote which indicates how that was done.

8 Q. I just wanted to clarify, because the footnote  
9 on Page 16, it sort of has two charts or two  
10 measurements. Footnote 21, it talks about a  
11 "low" being "1", "moderate" "2", "high" "3".  
12 And, then, it says "Total points are combined  
13 and assigned overall ratings based on the  
14 following breakdown:", and then you do  
15 "low-medium" "3 points", "moderate" "4",  
16 "moderate-high" "5 points", "high" "6". Do you  
17 see that?

18 A. Yes. Are you on Page 16 in the report?

19 Q. I am.

20 A. Okay.

21 Q. Yes.

22 A. Yes. Yes, I do see that, right here.

23 Q. So, for this particular Table 12 and this  
24 analysis of dominance, you don't do a moderate

[WITNESS: Raphael]

1 or low or low-moderate, that comes into play  
2 later? I guess, under overall visual effect  
3 ratings, is that where that comes into play?

4 A. No. That's, I mean, again, you know,  
5 moderate -- yes, that's right. I mean, when  
6 you total them up. And that's why, at the end,  
7 it's -- I guess it's also identified as --

8 *[Court reporter interruption.]*

9 **CONTINUED BY THE WITNESS:**

10 A. On Page 90, there's also a reference to that  
11 same breakdown.

12 BY MS. MALONEY:

13 Q. Okay. And you might recall during the  
14 technical session we asked you if you had a  
15 chart or a draft available with the numerical  
16 ratings that led to these conclusions of "low",  
17 "moderate", and "high". And you indicated that  
18 "The numerical ratings are provided in the  
19 visual assessments. You fill out the chart as  
20 the visual assessments developed." Is that  
21 what you told us?

22 A. Correct.

23 Q. And there were no separate handwritten notes or  
24 electronic documents that are filled out

[WITNESS: Raphael]

1 individually or as a group. Do you remember  
2 that?

3 A. No.

4 Q. And you indicated that "typically, two -- two  
5 to four staff verbally discuss the applicable  
6 ratings prior to filling out the charts and the  
7 visual assessments"?

8 A. That is correct.

9 Q. But you also indicate that "It should be noted  
10 that many of the charts have clearly defined  
11 quantitative and self-explanatory thresholds  
12 and do not require a discussion of multiple  
13 opinions." Do you see that?

14 A. Where is that?

15 Q. That was your response to the data request. Do  
16 you remember completing that?

17 A. You'd have to show me that context. I am  
18 not -- I don't recall that specifically.

19 Q. Okay. So, do you disagree with that statement?

20 A. I can't -- if you could provide me the context,  
21 I'd be happy to weigh in on whether I agree or  
22 disagree, but --

23 Q. I can show you a copy. I didn't actually come  
24 prepared to -- but, just to refresh your

[WITNESS: Raphael]

1 recollection, I could show you a copy?

2 A. Please.

3 (Atty. Maloney handing document  
4 to the witness.)

5 **BY THE WITNESS:**

6 A. Yes. I mean, generally, that's true. That's  
7 right. That's a fair and accurate  
8 representation of that portion of the process.  
9 We usually just, you know, review them and  
10 confirm that how the ratings have come out, you  
11 know, are consistent with all of our  
12 understanding and our fieldwork and the  
13 analysis that we conducted in the office.

14 BY MS. MALONEY:

15 Q. So, is it fair to say sort of the numerical  
16 ratings come up and they're, on the fly,  
17 they're translated to --

18 A. Not at all. The numerical ratings, you know,  
19 emerge in that process.

20 Q. But you haven't retained any of that  
21 documentation?

22 A. No.

23 Q. And you've indicated, in this answer once  
24 again, that "The charts have clearly defined

[WITNESS: Raphael]

1 quantitative and self-explanatory thresholds",  
2 correct?

3 A. Correct.

4 Q. And are you referring to these descriptions,  
5 the high, moderate, and low? Is that what  
6 you're referring to there?

7 A. Yes.

8 Q. Okay.

9 A. Correct.

10 Q. I'd like to go back to our discussion of  
11 determining the effect on the viewer from a  
12 sensitive scenic resource, and that begins on  
13 Page 88. We discussed last time the "extent of  
14 use" and "remoteness" criteria. I'd like to  
15 just take another look at the "activity" and  
16 the "duration of view" this time. And I guess  
17 on Page 88, if you look at the definitions  
18 you've talked about, you define "activity" as  
19 "the primary type of activity users are engaged  
20 in"?

21 A. Correct.

22 Q. And "duration of view" is "the extent or  
23 exposure to the project"?

24 A. Correct.

[WITNESS: Raphael]

1 Q. And, then, you have rated them "high",  
2 "medium", and "low". And, quickly, I guess,  
3 "low" is "access is difficult" -- or, rather,  
4 no, I'm sorry, that's "extent of use".  
5 "Activity": "Activities where visual quality  
6 and scenery of the landscape are unimportant to  
7 the experience." That would be "Low"?

8 A. Correct.

9 Q. And "Moderate" is "Activities where visual  
10 quality and scenery of the landscape are  
11 important but secondary to the experience."  
12 And "This would include activities such as  
13 fishing, motorboating, camping, hunting,  
14 rafting, and snowmobiling."

15 A. Correct.

16 Q. And "High": "Activities in which visual  
17 quality and scenery of the landscape are  
18 central to and significantly affect the  
19 experience. This would include activities such  
20 as paddling, viewing wildlife or scenery, and  
21 hiking." Do you see that?

22 A. Correct.

23 Q. That's correct. Okay. So, and I'm assuming  
24 you assigned numerical values to those as well,

[WITNESS: Raphael]

1 the high, medium, and low? That would be the  
2 1, 2, 3?

3 A. Yes.

4 Q. Okay. If I recall correctly, and correct me if  
5 I'm wrong, when we briefly discussed this last  
6 week, you talked about you relied on fieldwork  
7 and some internet searches to determine the  
8 activity and duration of view?

9 A. We relied on a variety of inputs, if you will.  
10 Overall experience, you know, years of being  
11 involved in wind energy projects, and other  
12 energy projects, to study and look at activity,  
13 and actual observations in the field. You  
14 know, internet searches alone aren't sufficient  
15 to provide guidance.

16 Q. So, just your experiences -- not "just", I'm  
17 sorry, because I don't mean to diminish that,  
18 your experience working with wind farms, your  
19 fieldwork, some internet searches, and --

20 A. My years of studying recreational patterns.  
21 I'm a professor in landscape architecture in  
22 the Parks, Recreation & Tourism Department at  
23 the Rubenstein School. And I've been looking  
24 at recreation patterns and park design and

[WITNESS: Raphael]

1 planning in that context for over 25 years.

2 Q. Okay. I think we briefly discussed last week  
3 the use of user surveys?

4 A. Yes.

5 Q. Do you recall that discussion?

6 A. Yes.

7 Q. And you did not use them in this Project?

8 A. I already answered in the affirmative, we did  
9 not, yes.

10 Q. Okay. Did you recommend user surveys?

11 A. User surveys are challenging to administer, I  
12 think as I said last week. They are, again,  
13 another data point. They can be helpful,  
14 certainly. But it's not something that is  
15 regularly done, typically done, for these types  
16 of projects.

17 In Maine, they have become something of an  
18 expectation. So, they are often employed, but,  
19 again, not for every project, but certain  
20 projects.

21 Q. But this is the first project you've worked on  
22 in New Hampshire, corrects?

23 A. Correct.

24 Q. Okay. And, so, the answer is "no, you didn't

[WITNESS: Raphael]

1 recommend user surveys"?

2 A. I never had and we didn't discuss it. So, it  
3 wasn't a question of recommending or not  
4 recommending. We didn't discuss user surveys.

5 Q. And you indicate that they do use them in  
6 Maine, correct?

7 A. For some projects, correct.

8 Q. Sure. I just have another exhibit.

9 *[Atty. Maloney distributing*  
10 *documents.]*

11 (The document, as described, was  
12 herewith marked as **Exhibit CP-14**  
13 for identification.)

14 BY MS. MALONEY:

15 Q. I'd like to direct your attention to Counsel  
16 for the Public 14, which is the Board of  
17 Environmental Protection order in the matter of  
18 Champlain Wind. And this was a project I know  
19 that you've cited in your materials, the Bowers  
20 Project?

21 A. This project, yes, --

22 Q. Yes.

23 A. -- we were involved with.

24 Q. And you were hired by the applicant in this

[WITNESS: Raphael]

1 project, correct?

2 A. That's correct.

3 Q. If you could -- and the Bowers Project is one  
4 in which they did use user surveys, correct?

5 A. Yes.

6 Q. And, now, this project involved impacts to a  
7 number of lakes that were about 8 miles away  
8 from the project, correct?

9 A. No. Some were closer, depending on the view  
10 and the lake. Some were proximate, some were  
11 distant.

12 Q. Okay. And, as I indicated, that you did do  
13 user surveys on this project?

14 A. I didn't do them. Someone, a University of  
15 Maine professor I believe was hired to develop  
16 the surveys.

17 Q. Okay. If you'd turn to the top of Page 9 of  
18 16. I mean, perhaps that's an error, but it  
19 says "The applicant's user survey". Do you see  
20 that?

21 A. Yes.

22 Q. Under Subsection D?

23 A. Yes.

24 Q. And you worked for the applicant, correct?

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[WITNESS: Raphael]

1 A. Correct.

2 Q. Okay. It indicates "The applicant's user  
3 survey indicates that 90 percent of the  
4 respondents gave the lakes high or the highest  
5 scenic value ratings in their current  
6 condition." Do you see that?

7 A. I do.

8 Q. Okay. And, then, the next sentence, it says  
9 "Further, after respondents were shown photo  
10 simulations of the views of the proposed  
11 project and asked the same question, those  
12 indicating that the lakes would have high or  
13 highest scenic value dropped from 90 to  
14 33 percent." Do you see that?

15 A. I do.

16 Q. And I guess the Board found that fairly  
17 persuasive? I think they state that. Do you  
18 see that?

19 A. I do.

20 Q. Now, in this particular -- so, I guess my  
21 question is, you didn't think the project would  
22 benefit from the use of one of these surveys?

23 A. As I said before, it wasn't discussed.

24 Q. Okay. And you didn't recommend it?

{SEC 2015-02} [Day 6/Morning Session ONLY] {09-28-16}

[WITNESS: Raphael]

1 A. As I said before, I did not recommend it.

2 Q. Okay.

3 A. Or not recommend it. I didn't recommend it or  
4 not recommend it, because it wasn't discussed.

5 Q. Okay. But you are the expert, visual impact  
6 expert, correct?

7 A. Yes. Of course.

8 Q. And you're familiar with all the protocols and  
9 tools that a visual impact expert use when they  
10 are doing an analysis for this kind of a  
11 project?

12 A. Yes.

13 Q. So, wouldn't that kind of recommendation come  
14 from you, the expert?

15 A. Possibly. It depends. I mean, you know, as I  
16 mentioned earlier, the reason user surveys have  
17 been used in Maine is it has become a practice  
18 that has been accepted and, you know, used.  
19 And it hasn't been used on every single  
20 project. We were involved in a number of  
21 projects, probably more projects, the majority  
22 of our projects did not have user surveys.

23 This project, which is very, very  
24 different from this proposal before the

[WITNESS: Raphael]

1 Committee, you know, was a very different  
2 project. And, under the circumstances of the  
3 project, it was determined that a user survey  
4 would be a tool, one of the many tools, to look  
5 at.

6 Q. Well, certainly, nothing prevented you from  
7 doing a user survey here?

8 A. No. That's right.

9 Q. I'd just like to turn to your conclusion and  
10 briefly go over that, beginning on Page 91. Is  
11 it fair to say there's no particular  
12 methodology that's a part of your conclusion?  
13 You don't go through any kind of a rating  
14 process with -- as far as the conclusion  
15 section is concerned?

16 A. No.

17 Q. But you do, for example, you discuss the  
18 mitigation, on Page 131.

19 A. I have discussed -- I'm sorry, on my page in  
20 the actual report has it as "Page 132", but --

21 Q. Oh, I'm sorry. Mine is "131" and "132".

22 A. Oh.

23 Q. But are we there?

24 A. Yes.

[WITNESS: Raphael]

1 Q. The section "Proposed Mitigation Measures"?

2 A. Yes.

3 Q. Okay. I noticed that also part of the  
4 conclusion you bring up the three other  
5 projects in New Hampshire, Groton Wind, Granite  
6 Reliable, and Lempster. Do you see that?

7 Now, on mine, and your bringing it up, on  
8 Page, I guess, 95, 96.

9 A. Oh. Okay. I'm sorry. I thought you were  
10 referring to this page. You said it's on Page  
11 95?

12 Q. Well, it starts on 95, and then you include a  
13 number of --

14 A. Yes, I see it. I'm sorry.

15 Q. That's all right. You have both a narrative  
16 and pictures of --

17 A. Right.

18 Q. -- all three projects. So, why is that in  
19 there?

20 A. Why is the -- why are the other projects in  
21 there?

22 Q. And all those paragraphs?

23 A. I think it provides a comparative view of other  
24 projects. And, because, you know, we're -- in

[WITNESS: Raphael]

1 the conclusion, it was, I think, useful to  
2 include those comparisons to the other projects  
3 that have been built. We've used, you know,  
4 these projects, in part, for reference and  
5 understanding of how wind energy has been  
6 built, and then responded to post-construction.  
7 We've certainly referred to, in this  
8 proceeding, as you know, to the Lempster Wind  
9 Project in a number of instances.

10 Q. Quite a bit.

11 A. So, it was, we felt, appropriate to put it in  
12 the context of the regional landscape. You may  
13 also recall that the, you know, the size of the  
14 project was based on the fact that Groton and  
15 Granite Reliable had, you know, significantly  
16 more turbines, so that provided us the context  
17 for that particular assessment piece.

18 Q. So, you put this in as comparables?

19 A. Well, in part, as references, really. In most  
20 instances, really, as a, you know, a reference  
21 to, again, understand the context of wind  
22 energy development in New Hampshire.

23 Q. In relationship to the other wind farms in New  
24 Hampshire?

[WITNESS: Raphael]

1 A. Yes.

2 Q. Do you remember, and you may not, but when I  
3 first -- my first few questions and we were  
4 discussing the SEC Decision and the Order on  
5 Pending Motions, and you -- the SEC indicated  
6 that "each project had to be determined on its  
7 own merits". Do you recall that discussion?

8 A. Yes. And we determined this Project on its own  
9 merits.

10 Q. But you wanted the Committee to compare this  
11 Project in relationship to the other projects  
12 in the state?

13 A. Well, just as surely as you're asking me the  
14 questions about Bowers, you're asking me to  
15 compare processes and reviews done for other  
16 projects. So, nothing happens in isolation.

17 However, Willard Pond was reviewed on its  
18 own merits and for its own characteristics. It  
19 is useful, again, to point to some of these  
20 other projects, to look at their pre- and  
21 post-construction conditions. And, again, we  
22 had a look at Lempster, in terms of the  
23 cumulative impact. So, while each project is  
24 different, there is useful takeaways from

[WITNESS: Raphael]

1 looking at each of these projects as well.

2 Q. If you look at Page 9 of the Bowers decision,  
3 and I think this is illustrative. The mid  
4 paragraph, following Paragraph E, it indicates  
5 "The appellants assert that since there are ten  
6 wind energy developments now operating in  
7 Maine, the Department was required to consider  
8 and give significant weight to certain evidence  
9 it submitted regarding the impact of turbine  
10 visibility on recreational users near other  
11 wind developments. The appellants assert that  
12 their post-construction intercept survey on  
13 Baskahegan" -- whoops, sorry -- Baska -- I  
14 forget --

15 A. Baskahegan.

16 Q. -- "Baskahegan Lake", I should know that, I'm  
17 from Maine, "provides proof that visibility of  
18 turbines is not adversely impacting scenic  
19 quality or recreational users of that  
20 resource."

21 I think you just referenced that with  
22 respect to your research on Lempster, correct?

23 A. Yes.

24 Q. However, the Board indicated in the next

[WITNESS: Raphael]

1 paragraph that "a consistent review process is  
2 utilized in the review of wind energy  
3 development applications; however, each wind  
4 energy development must be judged on its own  
5 merits against the licensing criteria, because  
6 each development has unique characteristics  
7 affecting scenic character. Comparisons to  
8 other developments are difficult and generally  
9 not helpful in determining whether the  
10 development at issue meets the licensing  
11 criteria."

12 And that was the sentiment of the SEC in  
13 its Order of Pending Motions on the 2012 Antrim  
14 project, was it not?

15 A. I can't characterize the SEC's sentiment. I  
16 was not involved in that project.

17 Q. Well, it was the exhibit I showed you when we  
18 first started out, that "each project had to  
19 be" --

20 A. "Each project had to be" what?

21 MS. MALONEY: I'm sorry. I was  
22 anticipating an objection.

23 MR. NEEDLEMAN: Well, I was waiting  
24 until you finished.

[WITNESS: Raphael]

1 BY MS. MALONEY:

2 Q. That "each project had to determined on its own  
3 merits"?

4 MR. NEEDLEMAN: I will object. I  
5 think, at this point, the witness has answered,  
6 and is being asked to characterize the SEC's  
7 decision.

8 MS. MALONEY: Well, he just said he  
9 agreed with it, that's why I asked him.

10 PRESIDING OFCR. SCOTT: All right.

11 BY MS. MALONEY:

12 Q. The next sentence indicated: "The Board  
13 reviewed the applicant's post-construction  
14 intercept survey which was done to gather  
15 information about the Stetson Wind  
16 development's scenic impacts, but sees limited  
17 value in extrapolating its results to a wind  
18 energy development in another location, with  
19 different topography, a different array of  
20 turbines, and different", and I've got "SRSNS",  
21 and those are the "Scenic Resources" --

22 A. Of State or National Significance.

23 Q. -- "of State or National Significance", yes.

24 And, so, obviously, the Board gave that

[WITNESS: Raphael]

1 less weight. They also indicated that  
2 "Dr. Palmer", at the bottom of the page, "also  
3 pointed out that the survey involved only  
4 "existing users", thus, former users who find  
5 the development so objectionable that they will  
6 no longer use Baskahegan Lake would not have  
7 been represented in [that] survey." Do you see  
8 that?

9 A. Yes, I do.

10 Q. And I think that could be true, I guess, of the  
11 users of Pillsbury State Park, who find the  
12 development of the Lempster Wind Farm so  
13 objectionable that they no longer go to  
14 Pillsbury State Park. I guess they wouldn't be  
15 there, they wouldn't be responding to it.

16 A. That may or may not be true. But the  
17 indicators we have is that use has increased.  
18 So, that's the dataset that we can rely on and  
19 has been identified. And that would certainly  
20 give you information, whereas what you're  
21 suggesting is conjecture.

22 Q. Well, actually, what you're suggesting is  
23 conjecture. You're suggesting that the wind  
24 turbines has increased usage at the State Park.

[WITNESS: Raphael]

1 A. I never stated that.

2 Q. I thought you just said "the use at" --

3 A. I didn't say -- I said that "usage at the park  
4 has increased after the wind project was  
5 constructed". I didn't say "the wind project  
6 increased use."

7 Q. Oh, well, I think you're trying to --

8 A. No, I didn't.

9 Q. You're not suggesting we should draw that  
10 correlation?

11 A. No. No. I'm just saying that users continue  
12 to go to Pillsbury State Park, and in  
13 increasing numbers.

14 Q. Are you familiar with the New Hampshire  
15 motocross track in Lempster, the dirt bike  
16 track?

17 A. No.

18 Q. Well, are you aware that that track was closed  
19 for a while and reopened shortly after 2008,  
20 and it's a quite popular tourist attraction?

21 A. No. I'm not aware of that.

22 Q. Is it possible that the increased traffic at  
23 the motor court could also be -- at the track,  
24 where they have races every weekend, that it

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[WITNESS: Raphael]

1           could also be attributable to the increased use  
2           of the State Park?

3   A.    I have no idea.

4   Q.    Okay.  Mr. Raphael, there's lots of different  
5           methodologies in your line of work, correct?

6   A.    All, you know, most of the accepted  
7           methodologies for visual assessment rely on the  
8           same basic considerations.

9   Q.    Okay.  But there are -- nobody uses your  
10          specific methodology?

11  A.    Well, I would say, as we've developed it, it is  
12          based on, again, as I mentioned earlier, the  
13          requirement to respond to the rules as stated.  
14          So, I would imagine most methodologies would be  
15          responsive to those rules, and the methodology  
16          would derive from those rules.  This  
17          methodology is not unique.  We may have  
18          provided, you know, specific details to flesh  
19          out the methodology and make it understandable.  
20          But, generally speaking, the methodology that  
21          we use is very consistent across the  
22          profession.

23  Q.    I understand that.  But, specifically, your  
24          specific methodology, isn't that proprietary to

[WITNESS: Raphael]

1 your company?

2 A. I hadn't thought of it that way. That's  
3 interesting. Well, I mean, I think every  
4 visual expert would certainly have certain  
5 specifics or details of the way they might do  
6 things. But, again, generally, I think, if --  
7 a peer review of this Project would indicate  
8 that it's pretty standard practice. In fact,  
9 your own consultant called it a "textbook case  
10 of visual analysis". And I think that's  
11 indicative, in part, of following accepted  
12 practices and standard approaches for  
13 conducting an assessment of this nature.

14 Q. But, certainly, Ms. Vissering's methodology was  
15 different than yours?

16 A. You know, again, that was the previous docket.  
17 So, I won't comment on that at this point.

18 Q. And Ms. Connelly's methodology is different  
19 than yours?

20 A. Very much so.

21 Q. And you've never seen her methodology before?

22 A. "Her methodology before"?

23 Q. Isn't that what you said? I think you --

24 A. No. You asked me if I -- forgive me. Please

[WITNESS: Raphael]

1 repeat the question.

2 Q. You've never seen Ms. Connelly's methodology  
3 used before?

4 A. No. Never. Ever.

5 Q. Are you familiar with a company called  
6 "Environmental Design & Research, Landscape  
7 Architect Company"?

8 A. I'm aware of them, yes.

9 Q. Are you aware that this firm is the visual  
10 impact expert for the Merrimack Valley  
11 Reliability Project here in New Hampshire?

12 A. I believe I understood that specifically.

13 Q. And would you be surprised to note that the  
14 methodology used by EDR is quite similar to  
15 Ms. Connelly's?

16 MR. NEEDLEMAN: I'm going to object.  
17 I don't -- and, first of all, I think, if  
18 that's an argument that's going to be made, it  
19 should be put in front of Mr. Raphael so he can  
20 compare them. And, second of all, I disagree  
21 with that. I don't think it's a correct  
22 characterization.

23 MS. MALONEY: I asked if he was  
24 aware.

[WITNESS: Raphael]

1 WITNESS RAPHAEL: I have not looked  
2 at their methodology. I could not comment on  
3 it.

4 BY MS. MALONEY:

5 Q. Are you aware that they use rating panels, like  
6 Ms. Connelly's, similar to what Ms. Connelly  
7 has used?

8 A. I believe I understood that. I don't, again,  
9 know the specifics involved.

10 Q. And you were present at the technical session,  
11 were you not?

12 A. Yes, I was. For a portion of it.

13 Q. And, certainly, you were there when  
14 Ms. Connelly was answering questions?

15 A. Yes.

16 Q. And, when she was asked about the rating  
17 panels, she indicated that "the rating panels  
18 are a tool", do you recall that?

19 A. Yes.

20 Q. And they were used to basically be a  
21 check-and-balance of her work, do you recall  
22 that?

23 A. I don't recall that specifically. I will take  
24 your word for it.

[WITNESS: Raphael]

1 Q. But you would agree she's the primary --  
2 primary expert in this case?

3 A. Yes.

4 Q. When it comes down to actually making the  
5 determinations of high, medium, or low, or the  
6 numerical values, there is a lot of judgment  
7 that's required, correct?

8 A. No. And, in fact, just to clarify, I just, you  
9 know, had a moment to just revisit how we did  
10 that very quickly. You know, the numerical  
11 ratings, low, medium, high, are very  
12 straightforward, they're 1, 2, and 3. So,  
13 there's, you know, we didn't, within those  
14 individual rankings of low, medium, and high,  
15 it wasn't, you know, rated. It's just "low"  
16 translates into "1", "medium" translate into  
17 "2", and a "high" translate into "3".

18 Q. But you have to have somebody making those  
19 values, 1, 2, and 3, correct?

20 A. Again, for many of the -- of the six criterion  
21 used on visual effect, four of them are pretty  
22 specific, and anybody could, you know, could,  
23 using the tools, they, and the framework that  
24 was provided, one would agree that, you know,

[WITNESS: Raphael]

1 we've used, for example, under distance, anyone  
2 could assess the distance of the Project using  
3 this tool. Is it, you know, less than 6 miles?  
4 Is it between 2 and 6 miles? Or is it closer  
5 than 2? Anybody can make that determination,  
6 either in the field or on the desktop using  
7 maps. So, there's no qualitative  
8 decision-making in that.

9 The same with number of turbines  
10 potentially visible, same with percent of  
11 visibility. All those are tools that we didn't  
12 invent, that we didn't analyze. They're  
13 straightforward, factual tools that contribute  
14 to the overall review and analysis and  
15 conclusions.

16 Q. Well, I understand that, and I appreciate that.  
17 But, when we look at our discussion of Willard  
18 Pond and the issue of dominance, you use those  
19 tools, which you describe here as "the charts  
20 have clearly defined quantitative and  
21 self-explanatory thresholds and do not require  
22 discussion of multiple opinions." And, then,  
23 you say "We used more. We didn't just rely on  
24 those tools." You went back to Willard Pond,

[WITNESS: Raphael]

1       you paddled around the pond, you paddled in a  
2       clockwise direction where you couldn't see the  
3       turbines. And those things all went into your  
4       determination that the pond was out-of-scale,  
5       despite using the tools that said "the scale  
6       was high", "the dominance was high"?

7    A.   That was, again, just one criterion, okay, of  
8       six under visual effect. There are also four  
9       criteria under viewer effect. So, they weighed  
10      in to the analysis and the conclusions. And,  
11      again, as I stated in the overview of our  
12      methodology, in the last step, in terms of the  
13      overall conclusion, we put that into a broader  
14      context.

15             And, yes, at the end of the day, I am the  
16      expert, I am the one who is sitting before you  
17      to respond to these questions. And I have to  
18      use those tools, and where they lead me, to  
19      determine whether this Project, or, in fact,  
20      this particular resource is unreasonably  
21      impacted. And it came out with a "moderate to  
22      high" under viewer effect -- I mean, visual  
23      effect. It came out with a "moderate" under  
24      viewer effect. So, you've got "moderate" and

[WITNESS: Raphael]

1 "moderate to high", that does not get me to  
2 "high". And, then, with the other factors that  
3 you've pointed out, and the actual experience  
4 of the entire resource, which is, you know,  
5 what an expert is required to do is to  
6 synthesize these various elements as you move  
7 along the process and come to the ultimate  
8 conclusion.

9 And there's a point at which you depart,  
10 certainly, from the rankings and the numerical  
11 assessments, if you will. Not that you ignore  
12 them, but they provide a point of departure for  
13 the final conclusion in which the broader scope  
14 of the resource is employed.

15 I mean, I think Bald Mountain provides an  
16 excellent example of how that happens. If we  
17 based our analysis of Bald Mountain purely on  
18 one viewpoint, which is, I believe, what  
19 Terraink's methodology does, it skews the  
20 understanding of that resource. It provides a  
21 false impression of the impact or the effect to  
22 that resource. So, you can't rely on the  
23 visual simulations in its entirety.

24 Q. But Bald Mountain -- right. But you understand

[WITNESS: Raphael]

1           that the rating panel is for a  
2           check-and-balance. That the expert views the  
3           entire resource?

4    A.    Well, the rating panel, if you're asking me as  
5           Terraink used it, is flawed by the fact that  
6           two out of the three raters never ever saw or  
7           visited the resources.

8    Q.    And you've never used a rating panel, correct?

9    A.    Well, we internally have sort of a *de facto*  
10           panel, as I -- as you pointed out.

11   Q.    But it's not a check-and-balance?

12   A.    Within the office, we have our own  
13           checks-and-balances, don't you worry.

14   Q.    Well, --

15   A.    You know, we have differences of opinion at  
16           times, of many things.

17   Q.    I'm sure you do. But this is -- this is, as  
18           you know, the protocol. It's the raters are  
19           given instructions. They are done independent.  
20           There is no discussion between them. This is  
21           a -- it's purely a check-and-balance procedure,  
22           you understand that?

23   A.    Right. But how can you provide a  
24           check-and-balance without a complete view of

[WITNESS: Raphael]

1 the resource? That's what I don't understand.

2 Q. EDR uses the same process.

3 A. And you have acknowledged these people, who  
4 have never been to the site, have based their  
5 entire conclusion on a single visual  
6 simulation. That's no check-and-balance as far  
7 as I'm concerned.

8 Q. All right. So, even if somebody approved of  
9 your methodology, though, I mean, and used your  
10 methodology, of course, they could come to a  
11 different conclusion, could they not?

12 A. From what? A different conclusion of what?

13 Q. Of unreasonable adverse impacts.

14 A. Depends on the project.

15 Q. Well, for example, in Bowers. In the Bowers  
16 case, and if you turn to Page 13, in that  
17 particular case, Dr. Palmer, who I think is the  
18 doctor you've referenced throughout your  
19 materials, was hired by the Department as their  
20 consultant. And he reviewed your methodology,  
21 and the Department approved of your  
22 methodology. But he came to a quite different  
23 conclusion than you did, didn't he?

24 A. No, he didn't, actually. He didn't find the

[WITNESS: Raphael]

1 project to be unreasonable in his final  
2 conclusion.

3 Q. If you turn to Page 11, it indicates that you  
4 concluded that "the project would not have an  
5 unreasonable adverse impact on the scenic  
6 character or existing uses related to the State  
7 Resources of State or National whatever" --  
8 "SRSNS within eight miles of the project."  
9 That you found "three" of the resources "would  
10 suffer a medium adverse impact". Do you see  
11 that?

12 A. Bottom of the page -- I'm sorry.

13 Q. I'm sorry. It's the second paragraph on  
14 Page 11.

15 A. Okay. Yes. I see that.

16 Q. However, it says, "The Department's scenic  
17 consultant disagreed with the applicant's  
18 conclusions on overall scenic impacts." Do you  
19 see that?

20 A. Yes, I do.

21 Q. And it says --

22 A. But that was scenic impact, not viewer effect.

23 Q. Well, we're talking that you said "three of the  
24 resources would suffer a medium adverse scenic

[WITNESS: Raphael]

1 impact." Do you see that? That's what you  
2 concluded.

3 A. Correct. I concluded --

4 Q. And the next -- if you let me finish?

5 A. I'm sorry.

6 Q. In the very next sentence it says "Dr. Palmer  
7 concluded that eight of the fourteen SRSNSs  
8 within an 8-mile radius of the proposed  
9 project...would sustain an overall scenic  
10 impact of 'medium' or higher."

11 A. Correct.

12 Q. That's not different from what you've  
13 concluded?

14 A. Yes. It is different.

15 Q. One of your criticisms of Ms. Connelly was that  
16 she didn't spend enough time at the Project,  
17 correct?

18 A. Correct.

19 Q. And you're not suggesting that, because the  
20 Committee didn't give her a year to complete  
21 her project she continue have done an adequate  
22 job or a good job? You're not suggesting that,  
23 are you?

24 A. No. All I'm suggesting is that she could have

[WITNESS: Raphael]

1 spent more time at the resources.

2 Q. And she would have been much more familiar with  
3 the resources?

4 A. Well, I think that would be a logical  
5 conclusion from that statement, yes.

6 Q. Right. And you think you did spend enough  
7 time?

8 A. Well, again, take Bald Mountain. I mean, I  
9 don't believe Terraink or her rating panels  
10 came away with a good sense or an understanding  
11 of the total resource.

12 Q. Because she disagreed with you?

13 A. No. Because they didn't understand the full  
14 breadth of the resource.

15 Q. Okay.

16 A. They had no understanding of its scope and  
17 scale and the visibility of the Project.

18 Q. And you did, with respect to your  
19 investigation, it was much more thorough?

20 A. I just spent the adequate amount, necessary  
21 amount of time to understand the Bald Mountain  
22 view was not just a single simulation from one,  
23 you know, ledge. But that the Bald Mountain  
24 experience has to do with the trail network and

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[WITNESS: Raphael]

1 other viewpoints that do not have Project  
2 visibility. And that is lost in your  
3 consultant's methodology.

4 Q. Well, understanding that some experts look at  
5 worst-case scenarios. Do you understand that?

6 A. Yes. But you can not base it entirely on a  
7 worst-case scenario. "Worst-case scenario" is  
8 the terminology used for visual simulation.  
9 And there's not universal agreement on that, by  
10 the way. Many visual simulations should be  
11 representative, not always worst-case.

12 Q. So, you, even though you weren't aware that  
13 Audubon owned 99 percent of the shore of  
14 Willard Pond, you think your investigation was  
15 superior?

16 A. First of all, --

17 MR. NEEDLEMAN: I going to object. I  
18 think the record shows that he was not aware  
19 that Audubon owned it. He was absolutely aware  
20 that it was all conservation land.

21 MS. MALONEY: Well, that's fine. But  
22 that's -- my question remains -- stands. He  
23 can object, but I don't know what the basis of  
24 the objection is.

[WITNESS: Raphael]

1 WITNESS RAPHAEL: Could you repeat  
2 the question for me please?

3 BY MS. MALONEY:

4 Q. That you weren't aware that Audubon owned 99  
5 percent of the shore of Willard Pond?

6 A. That really didn't matter in my review. I knew  
7 the land around the shore was conserved. That  
8 is what matters.

9 Q. And you didn't include the White Birch Historic  
10 District, even though the SEC rules indicate  
11 that historic districts are a scenic resource  
12 to be evaluated?

13 A. My understanding is that it's historic  
14 resources with a scenic quality that have  
15 public access.

16 Q. Okay.

17 A. And White Birch Point, first of all, we had no  
18 way of knowing that that's a historic resource.  
19 It's not listed anywhere. I understand it's  
20 eligible. But I don't know if there were any  
21 listings, number one.

22 Number two, under the rules, we are not  
23 charged to analyze it, nor could we, because  
24 it's private property with no access to the

[WITNESS: Raphael]

1 public. So, we had no way of reviewing it,  
2 even if it was an appropriate resource to  
3 review.

4 And, thirdly, the -- and I'm not an  
5 historic preservation expert, but I don't  
6 believe that White Birch Point is necessarily a  
7 resource primarily -- an historic resource  
8 primarily because of its scenic values. I  
9 understand it's perhaps a resource, because it  
10 represents an historic, you know, private  
11 summer camp development.

12 Q. So, you weren't even aware that it was a scenic  
13 resource?

14 A. Again, it's a historic resource initially. And  
15 there was no way we could have determined that.  
16 The only way that that came up is I think it  
17 was brought to our attention, I believe, or at  
18 least the first I heard of it, was during a  
19 site visit with the SEC.

20 Q. And you were also critical of her inclusion of  
21 Black Pond, and you apparently weren't aware  
22 that, at that particular location, where she  
23 took the simulations, there's a camp that 400  
24 kids populate during the summer?

[WITNESS: Raphael]

1 A. I was aware of that. But that's, again, a  
2 private property.

3 Q. And were you aware that they have an  
4 amphitheater that they rent out to the public  
5 for functions?

6 A. I was not specifically aware of that particular  
7 amphitheater and its rental. I knew there was  
8 a potential viewing point. But, again, that is  
9 a private property, which I have no right of  
10 access and is not considered a scenic resource  
11 in and of itself.

12 Q. And do you characterize the trail at Meadow  
13 Marsh as a "developed road"?

14 A. I think that's an unfair characterization. I  
15 said that it's a road -- well, certainly, that  
16 accesses it. And the point at which we  
17 stopped, it is a short trail through the marsh  
18 proper.

19 Q. And I think the record speaks for itself as to  
20 how you characterized it, but -- and, with  
21 respect to Bald Mountain, you characterized the  
22 viewpoint from the visual -- the simulation as  
23 something you had to "scramble done", and it  
24 wasn't a place that people would go at. That's

[WITNESS: Raphael]

1           how you characterized that?

2   A.    Absolutely.

3   Q.    Even though there's a --

4                                *[Court reporter interruption.]*

5   BY MS. MALONEY:

6   Q.    -- a cairn there, and, in literature, it's  
7           known as a "scenic overlook"?

8   A.    I think you've mischaracterized that.  The  
9           cairn is not at that particular point.  The  
10          cairn is at the summit of the mountain, the  
11          major cairn.  And that is one of several scenic  
12          viewpoints, not even the primary one.  It's the  
13          only viewpoint at which, if you go down and you  
14          know the Project is off to your left or to the  
15          north, then you can view it.  But, if you don't  
16          know that, and you're there in the summer, you  
17          will have no sense that the Project is to the  
18          north, because you cannot see it from the point  
19          at which you stop and take in the view.

20   Q.    Well, in any case, that's what you understood  
21          as a result of your research?

22   A.    No.  That's what I understood from having been  
23          there several times.

24   Q.    Well, that is your research, isn't it?

[WITNESS: Raphael]

1 A. Well, it's my fieldwork.

2 Q. Yes. I wanted to know if you had -- I know  
3 you've reviewed Ms. Connelly's Visual Impact  
4 Assessment, but I wonder if you could take a  
5 look at Page 13. And I handed this out last  
6 week, it's CP-1, it's just Page 13. I thought  
7 it would be easier for people to take a look  
8 at. Do you have that in front of you now?

9 A. No, I do not.

10 *(Atty. Maloney handing document*  
11 *to the witness.)*

12 BY MS. MALONEY:

13 Q. I note that, throughout your critique of  
14 Ms. Connelly --

15 MS. MALONEY: Does everybody have  
16 that? Okay.

17 BY MS. MALONEY:

18 Q. I note that, throughout your critique of  
19 Ms. Connelly's analysis, you repeatedly  
20 reference the "BLM". Do you know -- do you  
21 recall that?

22 A. Yes.

23 Q. But, like you did, what's indicated here, under  
24 "Visual Assessment Methodology", Ms. Connelly

[WITNESS: Raphael]

1 has indicated that "The VIA has utilized the  
2 standards put forth in 301.50...as well as  
3 encompassing a version of existing agency  
4 approved/developed methodologies that include,  
5 but are not limited to, the Bureau of Land  
6 Management, Visual Resource Management System,  
7 United States Army Corp of Engineers, Visual  
8 Assessment Process, United States Department of  
9 Agriculture, Forest Service, Landscape  
10 Aesthetics Handbook, the U.S. Department of  
11 Transportation, Federal Highway Commission,  
12 Guidelines for Visual Assessment of Highway  
13 Projects, and the New York State Development  
14 [Department?] of Environmental Conservation,  
15 Assessing and Mitigation Visual Impacts."

16 And, so, you did not criticize her use of  
17 anything other than BLM protocol, correct?

18 A. In terms of methodologies, these particular  
19 methodologies?

20 Q. Right.

21 A. Because she doesn't integrate or specifically  
22 reference any of these methodologies in her --  
23 in her actual analysis. She relies primarily  
24 on the BLM standards, as well as, I believe,

[WITNESS: Raphael]

1 the ROS. Those are the two that she  
2 specifically uses.

3 Q. And she'll be testifying at the end of these  
4 proceedings and could perhaps explain that  
5 better. But you don't have any criticism of  
6 her integration of any of these other resources  
7 in her Visual Impact Assessment?

8 A. Well, again, I can't speak specifically to the  
9 integration. I can't criticize. And, in fact,  
10 she should have identified these particularly  
11 as part of the background of understanding  
12 visual assessment.

13 Q. She doesn't do that right here?

14 A. I said she did, yes. And I think that's right.  
15 That's certainly not unusual. And it looks  
16 very similar to the list we use, certainly.

17 Q. Now, you don't recall, when I was asking about  
18 your methodology and we were going through each  
19 section of your analysis, that I had to ask you  
20 where you sourced the various components from.  
21 Do you recall that discussion?

22 A. I do.

23 Q. And you indicated, for the most part, you used  
24 BLM, that was your source, and in some -- some

[WITNESS: Raphael]

1 parts, and, in some cases there was an  
2 amalgamation. And I think once, with respect  
3 to cultural designation, I think you  
4 referenced -- I think it was the Highway  
5 Commission?

6 A. We only used BLM for the scenic quality  
7 evaluation.

8 Q. And that was it?

9 A. Yes.

10 Q. Okay. And the rest you used a blend?

11 A. The references, yes. And, again, the  
12 methodology really, in particular  
13 jurisdictions, are indeed driven by the rules  
14 and the requirements of those rules to address  
15 the particulars of the project within, you  
16 know, certain criteria, and that certainly  
17 provided the structure for the methodology.

18 Q. You also indicated that it was problematic that  
19 Ms. Connelly didn't do an inventory?

20 A. Correct.

21 Q. And you understood, however, that both the  
22 Applicant and the Committee asked Ms. Connelly  
23 to conserve resources?

24 A. I don't know that. So, I'm not aware of that.

[WITNESS: Raphael]

1 Q. And you understood that -- you weren't aware of  
2 that?

3 A. No.

4 Q. Well, you do indicate in your critique that you  
5 understood that there were time and resource  
6 constraints?

7 A. Correct.

8 Q. And, so, even though there's been several  
9 inventories of this Project done, and the SEC  
10 has already focused on the sensitive scenic  
11 resources, you think that Ms. Connelly should  
12 have reviewed and investigated all the 290 or  
13 so scenic resources?

14 A. I don't think that it's, you know, a critical  
15 flaw in the process. But I think -- I think,  
16 as I stated in my supplemental testimony, that  
17 it's important for an analysis to understand  
18 the broader nature of the resources in the  
19 region. Without that awareness, the focus  
20 becomes, I believe, unduly heightened on just  
21 those resources that you end up with. And, so,  
22 some effort should have been made to understand  
23 a broader set of resources that weren't being  
24 affected by this Project, to help put the

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[WITNESS: Raphael]

1 Project in the context it needs to be.

2 I have been in the same position that  
3 Terraink and Ms. Connelly has. And we have  
4 conducted our own inventory regardless of time  
5 constraints.

6 Q. Just hang on for one second. I just wanted to  
7 reference -- while I'm pulling up this  
8 document, certainly, there's nothing in your  
9 inventory that is flawed such that somebody  
10 couldn't use that as a reference?

11 A. I don't understand the question.

12 Q. Well, you stand behind your inventory of scenic  
13 resources?

14 A. An inventory is an inventory. We listed all  
15 the, you know, the potential resources that  
16 were in the 10-mile Project radius.

17 Q. Okay. I'm going to have to bring this over to  
18 you, because my computer is not functioning,  
19 and I can't reference the document.

20 I'd like to direct your attention to  
21 what's identified in Ms. Vissering --  
22 Ms. Connelly's report as "Figure 6: Visually  
23 Sensitive Resources".

24 MR. IACOPINO: Do you know what page

[WITNESS: Raphael]

1           that's from?

2                           PRESIDING OFCR. SCOTT: Off the  
3           record.

4                                   *[Brief off-the-record discussion*  
5                                   *ensued.]*

6                           PRESIDING OFCR. SCOTT: Okay. Back  
7           on the record.

8 BY MS. MALONEY:

9 Q.     So, I'm assuming you looked at this as part of  
10        looking at her overall report?

11 A.     Yes. I have a vague recollection of it.

12 Q.     Okay. And it does indicate the 10-mile radius  
13        of the Project, does it not?

14 A.     Yes, it does.

15 Q.     And it also indicates a variety of resources,  
16        most of which are included in your list, does  
17        it not?

18 A.     I'd have to really sit down with it. I can see  
19        right away that it's missing trails. It's  
20        missing scenic highways. It's missing a number  
21        of things that were in our analysis or in our  
22        inventory. You know, there's no reference, for  
23        example, I'm just looking, to -- let's see  
24        here. There's no identification, for example,

[WITNESS: Raphael]

1 of the Manahan Park that we visited on the SEC  
2 site visit.

3 Q. It's incorrect to say she didn't do any visual  
4 inventory, is it?

5 A. What's correct to say is she provided a map  
6 that she didn't generate. It looks to be  
7 derived from a ESRI street map. So, I don't  
8 know what went into her presentation of these  
9 resources. It appears as though it's basically  
10 a map that she copied and provided a radius on  
11 top of. But I don't know that for sure.

12 Q. You don't know that.

13 A. So, I can't comment further than that.

14 Q. Well, for example, with regard to your report,  
15 I'm going to bring up again the cultural  
16 designation, which you didn't derive from the  
17 BLM. Do you think it would be a fair critique  
18 of your report if I criticized you for not  
19 using the BLM methodology in that regard?

20 A. I don't think it would be a "fair critique",  
21 no.

22 Q. Okay.

23 (Short pause.)

24 MS. MALONEY: I have nothing further.

[WITNESS: Raphael]

1 PRESIDING OFCR. SCOTT: Thank you.

2 Members of the Subcommittee?

3 Mr. Forbes.

4 **BY DIR. FORBES:**

5 Q. I'd just like to follow up on something you  
6 were asked about early on in your testimony. I  
7 think I understood you, when asked about "had  
8 you ever found a project to have an  
9 unreasonable visual impact?", you said you  
10 "turned down work, but hadn't actually  
11 developed those kind of examples." Is that  
12 correct? Did I get that right?

13 A. No. Actually, the first project I ever  
14 undertook as an expert for the State of  
15 Vermont, my initial finding was that the  
16 proposed Searsburg Project would have an undue  
17 adverse impact. However, that was qualified by  
18 the fact that, if the applicant were to take  
19 certain mitigation measures, that that  
20 conclusion could change; and the applicant did.

21 Q. Well, but what I wanted to get at is, is  
22 actually just curious about your experience on  
23 projects where you might have been critiquing  
24 or providing a peer rereview of others' work.

[WITNESS: Raphael]

1 Have you done a lot of that kind of analyses?

2 A. Yes.

3 Q. For wind projects?

4 A. On -- well, Searsburg, for the State of  
5 Vermont, and one specific project for the State  
6 of Maine.

7 DIR. FORBES: Okay. Thank you.

8 That's all I have.

9 PRESIDING OFCR. SCOTT: Ms.

10 Weathersby.

11 MS. WEATHERSBY: Thank you.

12 BY MS. WEATHERSBY:

13 Q. Mr. Raphael, you're familiar with the Project  
14 as originally proposed in its first iteration  
15 in -- was it 2004, the 10-turbine proposal?

16 A. Yes.

17 Q. Would you agree or disagree with the SEC's  
18 decision that that Project had an unreasonable  
19 adverse effect on aesthetics?

20 A. I would do neither at this point, because I was  
21 not part of that docket. And I don't know what  
22 evidence was or was not presented before the  
23 SEC. So, I can't really comment on their  
24 decision.

[WITNESS: Raphael]

1 Q. Okay. I know you didn't do a study of the  
2 impacts from the White Birch historic area, but  
3 there is a simulation that was provided in part  
4 of the Application. I think it was the --  
5 originally done with the ten turbines. Have  
6 you seen that simulation?

7 A. I don't believe I've seen a simulation with ten  
8 turbines.

9 MS. WEATHERSBY: Perhaps your  
10 counsel, counsel for the Applicant, could  
11 provide it. It was part of the historic  
12 information, Appendix 9 -- Appendix 9e?  
13 Appendix 9e, right towards the end.

14 MR. NEEDLEMAN: We're trying to pull  
15 it up.

16 MS. WEATHERSBY: Okay.

17 PRESIDING OFCR. SCOTT: Do you have a  
18 page?

19 MS. WEATHERSBY: It's page, on the  
20 pdf, 45 of 46.

21 PRESIDING OFCR. SCOTT: And where are  
22 we looking again? I'm lost.

23 MR. IACOPINO: Appendix 9e to the  
24 Application, Historic Resource Inventory Forms.

[WITNESS: Raphael]

1                   PRESIDING OFCR. SCOTT: Right. But I  
2 think I was -- okay, so, the beginning part.  
3 So, even though the pdf is 153 pages, you're  
4 looking at --

5                   MS. WEATHERSBY: No. It's 46 pages.  
6 I'm looking at Page 45.

7                   PRESIDING OFCR. SCOTT: So, again,  
8 just so you can help me out, Ms. Weathersby.  
9 So, I'm showing Appendix 9e, "Historic Resource  
10 Inventory Forms". I'm on the wrong place,  
11 because I'm showing that as 153 pages.

12                   MS. WEATHERSBY: It's 9f, sorry.  
13 It's hard to find it.

14                   PRESIDING OFCR. SCOTT: So that would  
15 be "Determination of Effects Forms"?

16                   MS. WEATHERSBY: Correct.

17 BY MS. WEATHERSBY:

18 Q. On Pages 44 and 45 of that show the White  
19 Birch -- purport to show a simulation from the  
20 White Birch Historic District.

21 A. I have it in front of me.

22 Q. Okay.

23 A. I'm sorry.

24 Q. The white Birch Historic District is about two

[WITNESS: Raphael]

1 and a half miles away from the Project, is that  
2 right?

3 A. That sounds right. Again, I didn't analyze it.  
4 So, I don't know that specific --

5 Q. I understand. But looking -- by looking at  
6 that simulation, if you can, on Page 45, how  
7 would that score, if you can, on your chart for  
8 high, moderate, or low visual impact?

9 A. Again, with all due respect, I wouldn't want to  
10 provide you with a conclusion without the  
11 benefit of doing a complete analysis. I  
12 wouldn't be comfortable determining that. I  
13 have to walk through the entire analysis to  
14 come to that conclusion.

15 PRESIDING OFCR. SCOTT: Can you bring  
16 your microphone a lot closer?

17 WITNESS RAPHAEL: Oh, I'm sorry.

18 **BY THE WITNESS:**

19 A. So, again, I would really, given that I didn't  
20 spend much time there, only on the site visit  
21 for a very brief time, and, you know, I think,  
22 as I you saw, we do go through a very lengthy  
23 and step-by-step process. So, I really would  
24 not feel comfortable coming to a conclusion

[WITNESS: Raphael]

1 without the benefit of that analysis.

2 MS. WEATHERSBY: Okay. Thank you.

3 PRESIDING OFCR. SCOTT: Dr. Boisvert.

4 DR. BOISVERT: Thank you.

5 BY DR. BOISVERT:

6 Q. I'd like to offer a point of clarification.

7 You indicated that the White Birch Point was  
8 only listed as an "eligible property", it was  
9 not listed as an "historic property". Are you  
10 aware that eligible properties for historic  
11 preservation purposes actually have their own  
12 list and they are maintained by the State  
13 Historic Preservation Officer?

14 A. No. Again, I'm not an historic preservation  
15 expert and don't analysis historic properties.  
16 But I was not aware of that list. So, it's  
17 good to know that that exists. Thank you.

18 Q. It's a quirk of regulations that properties may  
19 be listed by the keeper of the National  
20 Register, which is a very lengthy process and  
21 expensive in many cases, whereas determination  
22 of eligibility are quicker and less expensive,  
23 and may be used by certain clients.

24 I have a concern about how you define the

[WITNESS: Raphael]

1 number of turbines that are visible for your  
2 visual assessments. You stated that one needed  
3 to be able to see the nacelle or, if you will,  
4 the stem of the tower, in order for it to count  
5 as being visible, even though a large portion  
6 of the rotor blades may be visible over the  
7 horizon. And I would have to double-check my  
8 notes, but I believe that, from the boat launch  
9 area at Willard Pond, you said that two were  
10 visible. When I looked at the photograph, I  
11 could see clearly the rotors of four, two full  
12 and two partial.

13 Do you not think it is misleading in the  
14 report to only report that the number of  
15 turbines visible as only those where the  
16 nacelle is visible?

17 A. Not necessarily, no. The reason we do that is  
18 that, again, and that's a standard procedure  
19 that then is revisited again, obviously, using  
20 a simulation and understanding the blades are  
21 visible. So, the visibility of the rotors or  
22 the blades are not discounted in the review  
23 itself. But, for that particular criterion,  
24 the issue is, we know that, when we see the

[WITNESS: Raphael]

1 nacelle, we're going to see the entire blade  
2 and the entire rotor, and, essentially, from  
3 the nacelle up, the entire turbine from that  
4 point.

5 But we don't know, except on a  
6 site-by-site basis, whether all of the rotor is  
7 going to be visible, half of the rotor is going  
8 to be visible, or just the tip, because the  
9 software that we rely on or the, you know, the  
10 tool that we rely on, you know, takes the  
11 measurement from the tip of the blade, but  
12 doesn't tell you how much of that blade you can  
13 see. And, therefore, we feel that, for that  
14 criterion, it is useful and more certain to  
15 start with the view of the full nacelle and the  
16 associated rotor, because, ostensibly, the  
17 primary and the bulk of the impact or effect  
18 will be generated from the full view of the  
19 nacelle and the rotor.

20 I've been in many situations where a  
21 portion of the rotor is certainly visible, but  
22 very difficult to detect above a treeline,  
23 where only a tip is visible, where only half is  
24 visible, and it could be off in a different

[WITNESS: Raphael]

1 location and disconnected with the primary  
2 view.

3 So, we have just found that using the  
4 nacelle as the reliable visible element in that  
5 particular step is a more certain way to  
6 analyze that particular aspect. But, as I said  
7 at the outset, we do take into account and do  
8 understand that, on a resource-by-resource  
9 basis, rotors may be visible, you know, to a  
10 greater or lesser extent, and that is factored  
11 into our analysis process.

12 Q. The nacelles are stationary, obviously, but the  
13 rotors rotate.

14 A. Correct.

15 Q. Does it not make a difference that the movement  
16 that can be perceived by someone from a given  
17 vantage point will be -- the eye will be  
18 directed towards something that is moving, and  
19 that, even though only a portion of the rotor  
20 circumference can be viewed, it can still be a  
21 significant observation, is easy to observe the  
22 moving rotor?

23 A. Again, it depends, particularly in terms of how  
24 much of that rotor is visible. Certainly, I

[WITNESS: Raphael]

1 would not argue with you that, you know, a  
2 moving object does draw the eye. Again,  
3 context here is very, very important.  
4 Distance, sometimes over distance, it's harder  
5 to detect that movement. Obviously, the more  
6 proximate the movement would be more apparent.  
7 There are other factors, though, again, from  
8 the vantage point at which may also be  
9 competing with the eye's attention, as I have  
10 found.

11 Excuse me. Even with rotors or turbines  
12 moving in the background, for example, if  
13 there's a lot of activity on the lake or many  
14 hikers or views in other directions, that could  
15 diminish or potentially heighten the visibility  
16 and the effect. So, it really depends on the  
17 context of the viewer and, you know, the  
18 circumstances of that particular moment.

19 Q. In your conclusions, you showed photographs of  
20 the Groton Wind Project on Pages 96 and 97.

21 How did you acquire those paragraphs? Did you  
22 take them yourself?

23 A. Yes, I did.

24 Q. Were those paragraphs taken from visual

[WITNESS: Raphael]

1 simulation points used in the Groton Wind  
2 Application?

3 A. I believe, and let me qualify that, I did not  
4 take all the pictures of Groton Wind. I  
5 believe the day that we were in that area, I  
6 was with a colleague, and he may have -- let me  
7 find those pictures, he may have taken those  
8 pictures, one or more of those pictures. But,  
9 yes. Those two pictures were actually taken by  
10 my colleague.

11 Q. Uh-huh.

12 A. And I did not necessarily key those pictures to  
13 a visual simulation of viewpoint.

14 Q. So, those pictures may represent a view that  
15 was never considered by the Groton Wind Site  
16 Evaluation Committee Subcommittee?

17 A. It is possible. I did come across, and I  
18 vaguely remember, some visual simulations, I  
19 think we may have found online, that were  
20 representative, were similar, similar views  
21 that these are used. And I think we did go to,  
22 you know, summits of Crosby Mountain, summit of  
23 Bald Mount -- Knob, as well as Rattlesnake  
24 Mountain, which I think were very -- had to

[WITNESS: Raphael]

1 have been identified as sensitive resources in  
2 that docket.

3 Q. Your expertise is aesthetics. And aesthetics  
4 are used for advertising for tourism. That is  
5 something that's relatively common, is it not?

6 A. Yes.

7 Q. Are you aware that the State of Maine is  
8 currently advertising on National Public Radio  
9 that, while fishing, even though you don't  
10 catch fish, you still enjoy the view, and that  
11 is enough to take home? Are you familiar with  
12 that particular advertising campaign?

13 A. No, I'm not. I'm not.

14 Q. Does it surprise you that someone would  
15 consider fishing to be more than just catching  
16 the fish?

17 A. No.

18 DR. BOISVERT: Thank you. That's it.

19 PRESIDING OFCR. SCOTT: Commissioner  
20 Rose.

21 CMSR. ROSE: Thank you.

22 BY CMSR. ROSE:

23 Q. Well, I think I'll pick right up on the  
24 fishing, as a fly fisherman myself. And I was

[WITNESS: Raphael]

1 struck by a comment you had made earlier  
2 referencing Willard Pond as a "typical type of  
3 pond for the area". Did I catch that  
4 correctly?

5 A. I don't -- I mean, I don't recall specifically  
6 that wording. But, certainly, the landscape  
7 around Willard Pond is not atypical of similar  
8 landscapes you find in ponds in southern New  
9 Hampshire and Northern New England.

10 Q. Well, and, in fact, I believe you referenced  
11 other ponds that you felt that might have a  
12 more scenic value, and I believe you referenced  
13 "May Pond". Did I catch that correctly?

14 A. I don't know if I stated "more scenic value".  
15 I believe that I might have identified that as  
16 having other scenic values. And, to me,  
17 personally, and, again, this is certainly  
18 something that I think in one of the exhibits  
19 referencing Jean Vissering's analysis, I mean,  
20 her publication for the Clean States Energy  
21 Alliance, that the more sort of topography and  
22 landscape character that's visible, in other  
23 words, more ridges and greater heights and so  
24 forth, the more scenic quality a particular

[WITNESS: Raphael]

1 view or setting might have. And I think I  
2 actually found, just paddling May Pond, to be a  
3 bit more engaging, because it had some distant  
4 ridges I could see, and, clearly, you know,  
5 right in the main view. And the shoreline was  
6 more intricate. And, so, as a paddler, those  
7 types of things appeal to me.

8 Q. Sure. And would you believe -- would you find  
9 it accurate that there are a lot of different  
10 characteristics that may make a experience  
11 unique to a user?

12 A. Certainly.

13 Q. And I believe it was, I mean, and that you have  
14 referenced in your remarks that you did not --  
15 that the characteristics of Willard Pond was a  
16 resource that was not necessarily unique in the  
17 region, and I think you just referenced May  
18 Pond as another example of a high value  
19 resource from a user perspective?

20 A. Yes.

21 Q. Is there -- I mean, I guess, is there a  
22 definition in terms of what you believe to be  
23 unique? Is like one of ten? One of a hundred?  
24 Is there something along those lines or is it

[WITNESS: Raphael]

1 just a little bit more subjective than  
2 quantitative?

3 A. That's a good question. I mean, I think most  
4 of us would find something to be unique if we  
5 came to it and we had never seen or experienced  
6 anything like it or similar.

7 Q. Right. And I think it was referenced with the  
8 Audubon in terms of the thousand plus acres of  
9 undeveloped pond as "relatively unique". But I  
10 don't recall if there was an answer to the  
11 question of other undeveloped ponds of that  
12 size in the region? Perhaps I missed it.

13 A. No. I mean, I did do some research and recall  
14 some of the work we had done. We actually came  
15 up with a list of almost two dozen ponds, both  
16 remote and undeveloped, as well as, you know,  
17 slightly developed, some with more difficult  
18 access and less difficult access. So, in the  
19 region, we did find a number of other resources  
20 that had attributes similar to Willard Pond.  
21 The fishing might have been different, warm  
22 water, cold water. Access might have been  
23 different. But there were a number of other  
24 ponds and lakes.

[WITNESS: Raphael]

1 Q. Well, one of the unique aspects or would you  
2 agree that one of two in the state would be  
3 pretty unique to a property?

4 A. In terms of what quality of uniqueness?

5 Q. In terms of its particulars that it possesses  
6 from a fishery perspective?

7 A. From a fishery perspective, you know, I  
8 wouldn't know that specifically. I would have  
9 to take your word for it.

10 Q. It was referenced earlier in some of the  
11 discussion that there is a -- what's called a  
12 "tiger trout" in Willard Pond, which is a very  
13 unique specie of trout. And, in fact, it is  
14 one of only two locations in the state that  
15 possesses tiger trout. So, from a fishing  
16 perspective, it is what I would consider to be  
17 very unique. And I found it a little  
18 dismissive to suggest that it is a location  
19 that does not possess, you know, typical -- an  
20 atypical type of resource. So, I just would  
21 find it rather unique in its nature.

22 A. If I may, again, you know, I would not weigh in  
23 on its fishing characteristics. My charge was  
24 really to review its scenic characteristics.

[WITNESS: Raphael]

1           So, from that perspective, I would not quibble  
2           with you that you find a unique quality to  
3           that.

4                     But my primary charge is to look at its  
5           scenic qualities in the analysis. As we've  
6           discussed, you know, its use certainly weighs  
7           into that. But I'm looking at it, in my  
8           statements, refer not to the fishery, but to  
9           the scenic characteristics.

10   Q.    But it is, would you not agree, one of the  
11           attributes that it's known for is its high  
12           quality fishery experience that it provides for  
13           a user?

14   A.    I would agree with that statement.

15   Q.    Thank you. One additional question. It was  
16           referenced earlier on in your testimony, with  
17           regards to the conservation lands that are  
18           going to be as a result of the mitigation for  
19           this particular project, and it was talking  
20           about the 908 acres of contiguous land that was  
21           going to be conserved through easement. Do I  
22           have that right?

23   A.    I think so, yes.

24   Q.    And I was -- and the question I had was, do you

[WITNESS: Raphael]

1 recall what the underlying property rights that  
2 were going to be retained by the owners of  
3 those lands, and I guess, perhaps more  
4 specifically, would that land still be active  
5 for timber management, timber harvesting,  
6 wildlife management, agricultural rights on  
7 those conservation lands?

8 A. I would not be surprised. I do not know the  
9 specifics. I think that's consistent with the  
10 conservation constraints on the sanctuary  
11 itself that, you know, still would be used for  
12 timber resources and wildlife management. So,  
13 I think that's similar.

14 CMSR. ROSE: Okay. Thank you.

15 WITNESS RAPHAEL: You're welcome.

16 Thank you.

17 PRESIDING OFCR. SCOTT: Off the  
18 record.

19 *[Brief off-the-record discussion*  
20 *ensued.]*

21 PRESIDING OFCR. SCOTT: Back on the  
22 record. We'll take a ten-minute break.

23 *(Recess taken at 10:56 a.m. and*  
24 *the hearing resumed at 11:08*

[WITNESS: Raphael]

1 a.m.)

2 PRESIDING OFCR. SCOTT: Okay. Back  
3 on the record. Mr. Clifford, do you have any  
4 questions?

5 MR. CLIFFORD: Yes, I do. Good  
6 morning.

7 WITNESS RAPHAEL: Good morning.

8 BY MR. CLIFFORD:

9 Q. I generally have some questions about the  
10 report, the sources we talked about. And I'm  
11 trying to get a feel for how you actually  
12 integrated or utilized, you mentioned, I wrote  
13 them down, you talked about the "Visual  
14 Simulation User Guide", the "Visual Impact  
15 Assessment for Highway Projects", the "BLM".  
16 What's the methodology that you used to  
17 synthesize those into your method of  
18 assessment? And then -- well, I'll have you  
19 answer that question first.

20 A. Sure. So, for example, one way that that would  
21 happen is FHA guidelines, U.S. Forest Service  
22 guidelines, and BLM guidelines have different  
23 distance zones for how they define  
24 "background", "foreground", and "mid-ground".

[WITNESS: Raphael]

1 And, so, we looked at those, and understood,  
2 for example, that highway projects, in  
3 particular, are much more focused on the  
4 highway corridor. So, how they view, you know,  
5 mid-ground, foreground, background is different  
6 than how the BLM or the Forest Service, that  
7 are looking at longer distance views of their  
8 resources consider what the breaking point is.

9 And I believe we kind of took, and I have  
10 to go back to my, you know, our notes in that  
11 regard, but, typically, we rely on sort of the  
12 generalized consistency between the U.S. Forest  
13 Service background, mid-ground, foreground, and  
14 the BLM.

15 But, you know, the Forest Service, you  
16 know, we try to be realistic in terms of the  
17 10-mile radius. You know, some have background  
18 quite far away, others have background closer.  
19 So, for example, that incorporation of those  
20 particular standards, if you will, are --  
21 perhaps inform the choice of what to use, by  
22 observations of how visible wind energy  
23 turbines are, for example, after 6 miles, they  
24 aren't as distinct, and the rotor blade is

[WITNESS: Raphael]

1 harder to detect, and so that drives where we  
2 draw the line, in terms of background versus  
3 mid-ground, for example.

4 Q. Okay. So, and then are each of these or do --  
5 yes, do each of these have some kind of  
6 scalable system? I know you mentioned the BLM  
7 study had some sort of target numbers that were  
8 referenced in it that you could then -- which  
9 you've applied in certain aspects of your  
10 report. But do each of these impose some kind  
11 of scale ranking system that you --

12 A. BLM is the one that uses ranking more so than  
13 Landscape Aesthetics or the others. Because,  
14 you know, one thing that's important to  
15 recognize, particularly with regard to U.S.  
16 Forest Service and Bureau of Land Management,  
17 those are focused particularly on their  
18 resources. And they connect with or relate it  
19 to how they manage those resources. So, both  
20 the Forest Service and BLM have, for example,  
21 management classes. And they don't -- usually,  
22 the question is consistency with the management  
23 goals for that particular class, when you're  
24 viewing a resource and assessing what the

[WITNESS: Raphael]

1 visual change will be from the proposed  
2 project.

3 Ranking, in terms of a "low", "medium",  
4 and "high", I believe does come in on the  
5 Recreational Opportunity Spectrum, but, again,  
6 that tool is really ultimately designed to  
7 provide management guidance to the Forest  
8 Service relative to their particular management  
9 class and the use of that area of a forest.

10 So, obviously, if it's a wilderness area,  
11 there would be a much higher degree of  
12 sensitivity for any proposal, because the  
13 wilderness area is managed to maintain very  
14 specific values. So, you know, the ranking  
15 system isn't, you know, employed in that  
16 particular instance except to rate its  
17 consistency with the management objectives.

18 I guess, you know, sort of it's certainly  
19 necessary and important to acknowledge, you  
20 know, the historic sources for understanding  
21 visual change and visual assessment. And  
22 that's why, in many of, if not all, of our  
23 visual assessments, we're going to reference  
24 the fact that we're familiar with Forest

[WITNESS: Raphael]

1 Service, BLM, FHA practice. And, of course,  
2 the other citations from, you know, written  
3 work by experts inform that as well.

4 So, you know, the whole practice of visual  
5 assessment, while, again, as I said earlier,  
6 relies on certain derivatives, such as  
7 initially the Forest Service approach  
8 historically, many of those initial sort of  
9 tools never anticipated wind energy, for  
10 example, or even solar, large-scale solar  
11 arrays. So, they are imperfect, except in  
12 those instances, such as in the BLM's most  
13 recent publication, where they do specifically  
14 reference wind and renewable energy. You know,  
15 those become, you know, generalized guidelines  
16 that we use as a point of departure, and not  
17 specific methodologies that run through the  
18 entire document or the analysis.

19 Q. Okay. And the other question I had was, I know  
20 you talked about number of turbines was a  
21 factor or one factor. But could you envision a  
22 project that involved one turbine that had a  
23 high visual impact, but may have been positive,  
24 or negative? I mean, can you give that kind of

[WITNESS: Raphael]

1 ranking in a given situation? Because you say  
2 it's just a number. And, clearly, you can  
3 reach -- there is probably a number at which  
4 you would say "that is clutter" or it creates a  
5 very large visual impact and give it a "high".  
6 I mean, I just can imagine that. But could  
7 there be a high impact with one or two  
8 turbines?

9 A. Yes, there could, depending on the context,  
10 definitely.

11 Q. Right. And, so, I'm thinking of, for example,  
12 I know there's a single turbine on the way into  
13 Boston. And have you seen that?

14 A. Yes.

15 Q. And, just for my benefit, if not the Committee,  
16 what would you do about assessing that impact?  
17 How would you go about assessing that?

18 A. That's a good question. Well, I think we would  
19 employ the same methodology, but, you know,  
20 factor in, again, the specifics of that  
21 context. In the sense that it's already very  
22 well-developed in that area. There are  
23 industrial uses. And there are other factors  
24 which speak to the fit of that single turbine,

[WITNESS: Raphael]

1           however large or whatever its scale  
2           relationship might be in its context, there are  
3           other factors which might, you know, perhaps  
4           diminish the impact overall because of  
5           characteristics of fit. And, then, in the step  
6           that assesses viewer effect, you know, there  
7           can be a very positive, you know, effect that  
8           people associate with wind energy that would go  
9           into an understanding of whether the project  
10          could be considered unreasonable or not. If a  
11          large number of people see that as -- or, a  
12          certain number of people see that as a positive  
13          effect, and helping to address climate change  
14          and provide alternatives, you know, that would  
15          be factored in, and probably would find that  
16          that project, as it is today, you know,  
17          acceptable in that context.

18        Q.    So, and by the same token, there's another  
19           single turbine in Massachusetts that I've seen  
20           on Route 90, which is in the western part of  
21           the state, --

22        A.    Uh-huh.

23        Q.    -- toward the Berkshires.

24        A.    Uh-huh.

[WITNESS: Raphael]

1 Q. So, you would apply a similar methodology and  
2 approach to analyzing that, that visual impact  
3 as well?

4 A. Yes.

5 Q. Okay. But, and then, to conclude, would you  
6 agree or say that, at the end of the day, that  
7 the visual impact is fairly -- is subjective at  
8 some level, that you can't really quantify it,  
9 you can't repeat the experiment and achieve  
10 consistent results each and every time, if you  
11 were to give -- have separate individuals apply  
12 the same criteria?

13 A. Well, again, I think it depends on the project.  
14 It may be very clear from the project and its  
15 context that going through the methodology that  
16 we use would pretty much yield a similar  
17 response. But there may be situations where  
18 there are different perspectives and a  
19 different, you know, opinion about whether that  
20 project is, you know, viable or acceptable or  
21 not.

22 It does, at times, you know, depend on the  
23 viewer and how the viewer looks at, you know,  
24 wind energy. You know, two examples I can give

[WITNESS: Raphael]

1       you is that, you know, if you're an industrial  
2       designer, you would look at a wind turbine  
3       using the term, you know, "form follows  
4       function", which is an architectural term.  
5       There's probably no other example of energy  
6       generation that is so clearly and specifically  
7       looks the way it does because of how it  
8       generates the energy. And, of course, there is  
9       that long history of windmills. From, you  
10      know, it was on the New York City seal, in  
11      fact, that that has been an accepted means of  
12      generating power for some period of time. And,  
13      therefore, so, there's a historical context,  
14      but then there's a design context.

15             And, then, finally, it does definitely  
16      depend on how you view wind energy. You know,  
17      my -- you know, my telling remark that I always  
18      recall and refer to is actually one that the  
19      author of the AMC Quiet Waters books use --  
20      used. When I asked him -- I actually called  
21      him, because, you know, he's one of the  
22      co-authors, and he's based in Vermont. And I  
23      asked him, you know, whether seeing a wind  
24      energy project on a lake in Maine would be a

[WITNESS: Raphael]

1 negative for him, seeing that he's out there  
2 describing these quiet waters and, you know,  
3 exhorting people to experience them. And he  
4 said "Not at all. In fact, it would give me a  
5 good feeling to know that that project, even  
6 from a wilderness pond, that that project is  
7 helping to keep our air clean and the waters  
8 clean, and fighting, you know, the changes of  
9 climate."

10 So, it's really -- it can often be a  
11 response to your perspective. And I think  
12 that's why, to Mr. Rose's question, I did not  
13 mean to be dismissive. Because, again, I'm  
14 looking at the scenic qualities, and I  
15 understand that, you know, going for fishing or  
16 other activities may have different interests  
17 and areas of focus associated with it.

18 Q. And my last question is, have you ever done a  
19 post-installation impact analysis, either just  
20 for your open edification or because a  
21 particular project required it or the owner of  
22 the project wanted to see what -- what the  
23 impact was after we concluded our project?

24 A. In Vermont, there is a requirement in many

[WITNESS: Raphael]

1 energy generation and transmission projects for  
2 post-construction review, primarily to assess  
3 the efficacy of mitigation. So, I've certainly  
4 been involved in a number of those on behalf of  
5 the State of Vermont. In a number of occasions  
6 I have gone back and looked at, you know, what  
7 we said and how we simulated a project, and  
8 whether our findings and our simulations were  
9 accurate. I did that, for example, for Rollins  
10 Wind, which is a project in Maine, and, you  
11 know, found that the simulation accurately  
12 represented what we had portrayed, you know, in  
13 the assessment and what was actually visible in  
14 the landscape. And, also, there was some  
15 concern, because it's in full view of a public  
16 park in the Town of Lincoln. And I went and  
17 spent a couple days observing the uses and  
18 activity of the public park and interviewing  
19 people. And, you know, the anecdotal and the  
20 experience that I've had numerous times is  
21 that, yes, you will find a mix of opinions, but  
22 you will often find more people really are  
23 either ambivalent or not particularly feeling  
24 strong one way or the over. Went to Lempster

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[WITNESS: Raphael]

1 and interviewed the ranger, and asked the  
2 ranger about the wind energy project. And the  
3 ranger said that very comments about that  
4 project ever came to her attention. She said  
5 that, on some nights, when the lake is calm,  
6 but there's a wind up on the ridge, people have  
7 noted that they could hear it. But there was  
8 no strong feelings of, you know, visual  
9 intrusion or undermining the experience. For  
10 the Sheffield Wind Project, we went back after  
11 it was built. There was both a historic  
12 resource at the end of the lake, which was a  
13 CCC-ERA beach house, and a very popular state  
14 park associated with that beach house. And,  
15 you know, five miles down the lake the entire  
16 16-turbine project was in full view. And I  
17 wanted to go back and see what the effect of  
18 that was after construction. And, so, again,  
19 spent a day paddling the entire park,  
20 interviewing people and talking with the  
21 ranger. The ranger said, you know, "we've had  
22 one negative comment and one positive comment,  
23 and several people just noting "oh, there are  
24 wind turbines in the distance"." And pointing

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1 out to me, much in the same instance as  
2 Lempster, that the use of the park actually had  
3 increased after, you know, and that's not  
4 neither here nor there, except it is one  
5 indicator, one data point, that was useful to  
6 know. So, there has been a real consistent  
7 take, I think, on these projects  
8 post-construction.

9 I also remember Lowell Mountain, which is  
10 called Kingdom Community Wind, a project I was  
11 involved with. One gentleman in particular,  
12 even though it was somewhat distant, but a very  
13 important and well-known gentleman, who was the  
14 president of Jay Peak. You may have heard of  
15 him. Recently, he got into some trouble with  
16 the EB-5 Program. But I remember him. We had  
17 a community meeting, a public meeting  
18 pre-project, and he got up and raised some  
19 serious concerns about what the visual impact  
20 of the project would be from Jay Peak. But Jay  
21 Peak is, obviously, up on a ridge, and this is  
22 up on a ridge, and yet it is beyond 10 miles to  
23 be sure. And I've gone there several times.  
24 I've interviewed people. They didn't even know

[WITNESS: Raphael]

1 the wind project was there. So, people really  
2 go about their activities even with the wind  
3 project in view.

4 Finally, I mean, we've talked about Jim  
5 Palmer. After the Bowers decision, and I  
6 believe it's 2015, he wrote a piece on the size  
7 and effect of wind energy projects in Maine and  
8 there, you know, impact on people's use and  
9 enjoyment and willingness to return.

10 And, apropos of the line of questioning  
11 that I received from Public Counsel, yes, he  
12 did find, in some instances, and in the Bowers  
13 Project in particular, that there could be  
14 potentially a high scenic impact. But, even in  
15 those instances, and based on his studies of, I  
16 think, all of the wind energy projects built in  
17 Maine, or at least most of them, that even  
18 where there was determined to be the potential  
19 for high scenic impact, the impact on use and  
20 enjoyment and willingness to return was  
21 negligible.

22 And, so, the data that we have available,  
23 the experience that I have personally, shows  
24 that we are always concerned and worried about

[WITNESS: Raphael]

1           what we don't know and what isn't present in  
2           the landscape at the current time. And it's  
3           very hard sometimes, truly, to anticipate what  
4           that effect is going to be. But  
5           post-construction studies, and my own, you  
6           know, review over many years of experience,  
7           have found that, while the concerns were  
8           really, really high, the end result for the  
9           typical user and the use of the resources that  
10          were in question were not unduly or  
11          unreasonably affected. And, in fact, the  
12          effect has been hard to measure, negative or  
13          positive.

14                         MR. CLIFFORD: Thank you.

15                         PRESIDING OFCR. SCOTT: Good morning.

16 BY PRESIDING OFCR. SCOTT:

17 Q. I'll start with just a clarification. So, in  
18 your discussion with Counsel for the Public  
19 about your ranking system, am I correct, you  
20 both used, I think interchangeably, "moderate"  
21 and "medium" in your discussion? There's no  
22 difference, correct?

23 A. Right.

24 Q. Okay. I just wanted to make that clear.

[WITNESS: Raphael]

1 Obviously, the Applicant had an earlier  
2 application, as you're well aware, with ten  
3 turbines. This is a different application,  
4 with nine, and some other changes. Were you  
5 involved in that discussion or the decision to  
6 go from nine to ten or did you come in after  
7 that project was -- this latest revision was  
8 done?

9 A. I was not involved in that decision.

10 Q. Okay. The SEC rules, I was just curious, since  
11 I was involved in making the rules, if you  
12 would --

13 A. Oh-oh.

14 Q. I was just curious to get your opinion. You  
15 know, I think a lot of discussion around visual  
16 impacts, this is -- I don't want to put words  
17 in your mouth, certainly my words are, we're  
18 trying to take a subjective thing and make it  
19 quantitative. So, is that somewhat in agreement  
20 with you?

21 A. Yes. I think, you know, I think, maybe as  
22 we've established here, we want to lay out as  
23 much of an objective assessment as possible.  
24 I'm not going to sit here and tell you that

[WITNESS: Raphael]

1 "judgment isn't employed", because it is. And  
2 we try to create the best tools possible, and  
3 the most objective tools possible. But there  
4 is a point at which, certainly, you have to  
5 weigh, as we discussed earlier, you have to  
6 weigh all those findings through that analysis,  
7 and then factor in at the end of it all the  
8 mitigation measures, the overall context in the  
9 region, and cumulative impact. And that's  
10 where, you know, the synthesis occurs. And an  
11 expert like myself, you know, takes the time to  
12 weigh those considerations in the ultimate  
13 conclusion.

14 Q. And, back to the rules. Have they -- this is  
15 your first go at doing an assessment with the  
16 rules in place, correct?

17 A. Correct.

18 Q. Are the rules an impediment or have they been  
19 value-added, in your opinion?

20 A. I think they're value-added. I think every  
21 step that we further refine and develop rules  
22 that are consistent and that we can agree on is  
23 for the better, in terms of analyzing projects  
24 like this. And those rules, as I'm sure you're

[WITNESS: Raphael]

1 well aware, have some derivatives themselves,  
2 in terms of application in other states and in  
3 other projects. So, I think they are not  
4 unreasonable. I think they're quite  
5 reasonable, and provide, I think, an  
6 appropriate framework for the analysis before  
7 you.

8 Q. And, if I understood correctly, the methodology  
9 you've laid out in your report, this is the  
10 first time you've used this?

11 A. No. I've actually used this methodology at  
12 least a half a dozen times, in a number of  
13 different projects, and including wind projects  
14 in Maine. Most recently, the same basic  
15 analysis approach, actually, as part of a  
16 project before the SEC on transmission.  
17 Obviously, the thresholds and some of the  
18 descriptors and criteria are changed to reflect  
19 the transmission line, which is, you know, a  
20 slightly different element in the landscape, I  
21 think we would all admit, than a wind energy  
22 project. But the same basic, you know,  
23 starting with the inventory, assessing the  
24 resources and the scenic quality, and then

[WITNESS: Raphael]

1 going through the viewer -- I mean, the visual  
2 and viewer effect were exactly the same.

3 Q. So, what I was assuming is, with the addition  
4 of the rules, that was an additional component  
5 that you hadn't had to use before. Am I  
6 correct with that?

7 A. Well, again, the rules provided a specific  
8 framework that provided the key points that we  
9 had to address. The methodology only is  
10 refined and detailed in response to those  
11 rules. Just as they are, you know, refined and  
12 detailed in response to rules in Vermont or  
13 Maine, which have slightly different language,  
14 perhaps, as well as a slightly different sort  
15 of step-by-step process that they require you  
16 to go through. The end result and many of the  
17 considerations are exactly the same, in terms  
18 of how you get from a starting point to  
19 determining whether, in Vermont it's "undue  
20 adverse", in New Hampshire, it's "unreasonably  
21 adverse".

22 Q. And, in some of the questioning, I think there  
23 were concerns looking at your report that, if  
24 you were using that evaluation system to

[WITNESS: Raphael]

1 evaluate a project with a relatively small  
2 number of turbines, that you'd never get to a  
3 point where you'd say it was "unreasonable".  
4 So, I think maybe Mr. Clifford asked a similar  
5 question. Can you help me with that a little  
6 bit? Obviously, the less turbines, the less  
7 impact, correct?

8 A. Right. But, again, and that's why there are  
9 the number of criteria that we use, both under  
10 visual and viewer effect. And I'm sure that,  
11 you know, to reference a question I had earlier  
12 about, you know, turbines on top of Cathedral  
13 Ledge or White Horse Ledge, I'm, you know,  
14 familiar with those locations. Yes, it might  
15 have a low rating under number of turbines  
16 visible, but I assure you that the impacts or  
17 the effects would rise under other criteria.  
18 And, then, I think some other, you know,  
19 factors emerge, whether it has to do with a  
20 cultural designation or whatever other  
21 contextual elements would factor in.

22 But, to get back to the core component of  
23 your question, there's no question that, with  
24 this methodology, you would -- you could end up

[WITNESS: Raphael]

1 with a high impact. I would just qualify that  
2 by saying that I think, you know, the  
3 development community has, I think, developed  
4 means by which to vet these projects before  
5 they got to that point. So, some places, like  
6 a Cathedral Ledge, might emerge even if you  
7 could, you know, even if that property was  
8 available for wind power. Which, actually,  
9 there is wind power on Forest Service property  
10 in Searsburg, and one that's just been approved  
11 to expand that, called "Deerfield Wind".

12 I think, you know, it would really rise  
13 pretty quickly to the top that it was going to  
14 be a very uphill battle to site a wind project  
15 here. And, in fact, I was asked quite a few  
16 years ago to -- by the Lamoille --

17 *[Court reporter interruption.]*

18 WITNESS RAPHAEL: Oh, I'm sorry.

19 **CONTINUED BY THE WITNESS:**

20 A. I was asked several years ago by the Lamoille  
21 County Economic Development Council to look at  
22 the potential for a wind energy project on the  
23 north side of the Mount Mansfield/Spruce Peak  
24 complex. And I remember very distinctly only

[WITNESS: Raphael]

1           because we drove to the very top of Spruce  
2           Peak.  And we looked out and we saw, you know,  
3           Mansfield across the highway, we saw the  
4           distant views to Madonna.  And I was actually  
5           with one of the best-known wind energy  
6           developers in the state, and it became very  
7           clear that a wind energy project, from my  
8           perspective, in that location, would not fly  
9           from an aesthetic perspective, and that project  
10          did not go any further.

11  BY PRESIDING OFCR. SCOTT:

12  Q.    So, maybe to put a finer point on it.  So,  
13          you've kind of identified Cathedral Ledge as a  
14          place that would -- that it would have an  
15          unreasonable impact?

16  A.    Again, I mean, without going through a complete  
17          analysis, my gut would tell me it would be a  
18          place I'd want to avoid if a developer would  
19          ask me that.

20  Q.    Okay.  So, what's markedly different between  
21          that and the impacts on Willard Pond?  So, help  
22          me -- I know it's hard to draw these fine  
23          lines, I think, and --

24  A.    Sure.

[WITNESS: Raphael]

1 Q. -- or, bright lines, I think.

2 A. Right. Well, again, I think, you know, both  
3 the combination of the analysis and the  
4 observations and the information that we have  
5 had available. And, you know, nothing that's  
6 been presented to me today, you know, changes  
7 that conclusion. Is that, again, when we  
8 looked at the tools, first of all, that we had,  
9 there is an exhibit, I think it's 17, I  
10 believe, in my report, which gives a 180-degree  
11 panorama of the pond, and shows the relative  
12 size and scale of the project in relationship  
13 to the overall pond. And it has and it  
14 occupies a very small portion of that overall  
15 view. You know, so, that's different. I mean,  
16 a Cathedral Ledge, you couldn't approach or use  
17 that ledge and not be out of view of that  
18 project.

19 And I felt that the relationship, even  
20 with the rotors and blades visible in the  
21 simulation, for example, from the boat launch,  
22 the relationship of the energy project to the  
23 skyline of the trees was not exceedingly  
24 discordant. And, actually, you could find some

[WITNESS: Raphael]

1 connectivity to the linear quality of the trees  
2 and the tops of the pines, so that the  
3 turbines, you know, didn't seem totally out of  
4 place in that context.

5 And, then, I think, again, having spent  
6 time hiking and paddling and observing, you  
7 know, people using the pond day-in and day-out,  
8 and also informed by, you know, the lengthy  
9 post-construction experience I've had, I  
10 believe unequivocally that people will still  
11 use Willard Pond, will still enjoy Willard  
12 Pond. You know, I don't believe the fishing is  
13 going to change. I think you'll still be able  
14 to enjoy fishing for trout. And, in fact, as  
15 recently as a couple of weeks ago when I was  
16 there, I observed some young people who had  
17 pulled up to the boat launch and were having a  
18 heck of a time just swimming right in front of  
19 the boat launch. And, you know, they weren't  
20 really cognizant of their environs. They were  
21 enjoying being with each other and swimming in  
22 a cool water. And I felt, observing that, gave  
23 me more sense, even though I already had it,  
24 that, you know, despite the change in visual

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[WITNESS: Raphael]

1           qualities, that the change wouldn't be so  
2           dramatic and so great that it would undermine,  
3           you know, the continued use and enjoyment of  
4           that resource.

5           I also was hiking that same day on Bald  
6           Mountain, and ran into a young man, I think he  
7           was in his early 30s, from Peterborough. He  
8           didn't actually have any idea that a wind  
9           energy project was being proposed. And I asked  
10          him, "If, you know, you knew there was a wind  
11          power project on Willard and Tuttle Mountains,  
12          and, you know, you went to this particular  
13          ledge", we were right near it, "and looked over  
14          and saw it, what would be your -- would you be  
15          concerned? Would you continue to come up here?  
16          Would you?" And he said "No, not at all,  
17          because I support wind energy."

18          So, you know, and I'm sure that, for every  
19          one of those, somebody would say "well, you're  
20          going to find somebody who said "No, I don't  
21          support wind energy and I wouldn't"."

22          But, in the totality of the review, and my  
23          sense of Willard Pond, and, again, you know, my  
24          experience spending lengthy periods of time

[WITNESS: Raphael]

1 recreating myself and watching other people  
2 recreate in view of the wind energy projects,  
3 there may be a touch point initially where you  
4 approach that pond and you go "Oh, there's a  
5 wind energy project up there. How  
6 interesting." But, then, I think, as you get  
7 along with your activities, you're going to  
8 quickly, you know, put that into the  
9 background.

10 I mean, I found, even when I went to  
11 Lempster and May Pond, and even when I went to  
12 Crystal Lake, to review the project, and I was  
13 there to really focus and really do a reality  
14 check, you know, because I wanted to -- I  
15 wanted to know that, you know, what I had said  
16 and how he assessed it was appropriate and  
17 correct. I found it very difficult to focus on  
18 a view of the project, because I'm paddling,  
19 there was some waves, there were people coming  
20 and going, motorboats, things of that nature,  
21 plus I was drawn to the shoreline and other  
22 attractions that captured my interest and made  
23 my day.

24 So, taken from that perspective, I believe

[WITNESS: Raphael]

1 Willard Pond is very different from, you know,  
2 the example that we were talking about. And  
3 that, in fact, in some ways, there's an  
4 opportunity here, as I mentioned, to look at  
5 this in a very positive manner, that Willard  
6 Pond and the sanctuary will continue to be  
7 healthy and grow maple trees and native  
8 vegetation and wildlife, because we are  
9 addressing climate change. And I don't see  
10 that as inconsistent with, despite the name of  
11 "sanctuary", and I think the sanctuary has to  
12 do with wildlife in part, I don't think that's  
13 inconsistent with the conservation use that,  
14 after all, has always been about wise use of  
15 resources. Whether it's the gravel and  
16 geologic resources, the timber resources, the  
17 water resources, or the wind resources.

18 PRESIDING OFCR. SCOTT: Okay. Thank  
19 you.

20 Mr. Iacopino.

21 MR. IACOPINO: Thank you. Mr.  
22 Chairman, as you know, I missed the afternoon  
23 on Friday. So, if I get into anything that was  
24 covered through cross-examination, please feel

[WITNESS: Raphael]

1 free to stop me, okay?

2 BY MR. IACOPINO:

3 Q. Mr. Raphael, I'm going to apologize in the  
4 beginning for this first series of questions,  
5 but you did raise the fact that you are  
6 colorblind during the course of your testimony.

7 A. Yes.

8 Q. And, for the record, would you please tell us  
9 how that impairment manifests itself with you.

10 A. It has to do with very subtle differences in  
11 colors. So, it's hard sometimes for me to tell  
12 navy from black, or, you're going to laugh at  
13 this, pink from beige. I once never forget  
14 buying a pair of pants that I thought was  
15 beige, and my said "Do you realize you bought a  
16 pair of pink pants?" So, that's when I really  
17 understood the nature of my colorblindness.  
18 It's not dramatic. But it's subtle enough  
19 that -- to the questioning that I was asked,  
20 the brighter distinction between the turbine  
21 numbers on that visibility map were important.

22 Q. Some of your photo simulations have been  
23 criticized by various parties in the docket,  
24 because they were on cloudy days and don't

[WITNESS: Raphael]

1 provide contrast. Does the colorblindness that  
2 you suffer have anything to do or affect your  
3 ability to detect contrast?

4 A. No.

5 Q. Okay. Just a housekeeping question. You were  
6 asked by Counsel for the Public today about a  
7 term that was used as being the "primary  
8 expert", and I think she was referring to Ms.  
9 Connelly. What did you mean when you said that  
10 "yes, she is the primary expert"?

11 A. That she has entered in the visual assessment  
12 under her -- and testimony, under her name and  
13 that of her company's.

14 Q. Okay. There was some discussion today about  
15 "White Birch Point". And, if I understand, I  
16 just want to make sure I understand your  
17 testimony correctly, that despite the fact that  
18 it is a historic site, which would bring it in  
19 under our rules, Section 102.45, the reason why  
20 you did not bring it into your evaluation is  
21 because the public does not have a legal right  
22 of access to it, which is part of that rule as  
23 well, is that correct?

24 A. Correct.

[WITNESS: Raphael]

1 Q. Okay. We, and this is not my first rodeo with  
2 wind turbine projects, we've become accustomed  
3 to seeing the photo simulations that you've  
4 presented and that other experts and  
5 consultants have presented. And, to me, it  
6 always seems that these video simulations are  
7 of turbines.

8           However, when I look at pictures of  
9 projects after-the-fact, it seems to me, and  
10 this may just be subjective, but that the  
11 ugliest part of some, that you see in some  
12 photos, is not necessarily turbines, but roads.  
13 And, in fact, I think you had a view of the  
14 Groton Wind Project that showed -- I don't know  
15 where -- I forget where it was taken from, I  
16 know it's in your VIA, but shows sort of an  
17 extensive area of where there was clearing and  
18 roadway that you could see from that viewpoint.

19           In this case, have you been able to  
20 determine if there are any of the viewpoints  
21 that you've gone through where roadways are  
22 going to be visible, rather than just the  
23 turbines that we see in the photo simulations?

24 A. You may be able to see a portion or a -- some

[WITNESS: Raphael]

1 effect that would indicate either clearing or  
2 roads, I believe, from Goodhue Hill. But,  
3 honestly, we have found, and I think that's one  
4 of the real positive aspects of this Project,  
5 that the clearing and the visibility of the  
6 roads is really limited, if at all, from most  
7 of the vantage points that we analyzed the  
8 Project from.

9 Q. Do you anticipate any visibility of roads or  
10 clearings from Willard Pond?

11 A. No.

12 Q. I'm just going to go down through your list of  
13 things. How about from Pitcher Mountain?

14 A. I don't think so. You might, you will see --  
15 you might, on a clear day, sharp day, with the  
16 sun in the right angle, you might be able to  
17 see a shadow line where roads are. You may be  
18 able to see initially, after construction, some  
19 evidence of clearing. But, as the Project  
20 revegetates, I believe that will go away.

21 So, --

22 Q. How about the Clark Summit -- Clark Summit  
23 Scenic Viewshed?

24 A. Well, if I may, could I go to the simulation of

[WITNESS: Raphael]

1           that?

2    Q.    Please do.

3    A.    Yes.

4    Q.    Please do.

5    A.    Give me a moment.  Do you know what exhibit  
6           that is?

7    Q.    I don't know what exhibit.  I'm actually going  
8           off of your --

9    A.    Okay.

10   Q.    -- one of your lists of sensitive resources  
11           that you did during the course of your  
12           methodology.  The ten points that you had --  
13           the ten viewpoints you had identified.

14   A.    Right.  I don't know if we -- can't remember if  
15           we did that simulation.  So, I can't -- can't  
16           comment on that without the simulation in front  
17           of me.  Again, I think that --

18   Q.    It's "number 74" it's identified as.  Does that  
19           help you in determining if you did a  
20           simulation?

21   A.    No, it doesn't jibe with the exhibits.  You  
22           know, I know that, for example, from Crotched  
23           Mountain, again, you probably will see shadow  
24           lines from where the roads are, and I would

[WITNESS: Raphael]

1 expect that would probably be visible from the  
2 Clark Summit vantage point as well. But I  
3 don't know -- I'm pretty certain that you would  
4 not actually see the roadbed itself.

5 Q. And how about Hedgehog Mountain Summit --  
6 Summit Scenic Viewshed?

7 A. I don't believe so. But I didn't personally go  
8 to Hedgehog Mountain summit. So, I can't  
9 comment on that.

10 Q. Now, the Scenic Viewshed (north of --

11 *[Court reporter interruption.]*

12 BY MR. IACOPINO:

13 Q. Scenic viewshed (north of Clark summit)?

14 A. Again, I think it's pretty safe to say that you  
15 might see some shadow lines. But I can make  
16 the general statement, from having looked at  
17 both the layout, the topography, and the  
18 proposed grading, along with the height of the  
19 vegetation and the lay of the land, that,  
20 essentially, from most high points, what you  
21 will see, again, under certain conditions, are  
22 probably shadow lines from where the roads are  
23 built initially. And those may dissipate over  
24 time as it revegetates or the, you know,

[WITNESS: Raphael]

1           vegetation grows.

2   Q.    Let me skip down to number 9, the  
3           Monadnock-Sunapee Greenway?

4   A.    Let me go look to -- okay, unfortunately,  
5           that's not -- forgive me, because I don't have  
6           these, I'm trying to remember from that  
7           perspective. I think a similar -- there may  
8           be, again, initially, a view of a portion of a  
9           clearing from that perspective. But, again, I  
10          don't think it's substantive.

11   Q.    All right. And my last one I'm going to ask  
12          you about is what about Bald Mountain?

13   A.    No. Bald Mountain, I don't think you will.

14   Q.    Even down on that ledge?

15   A.    Yes. You'll see the turbines, obviously. But  
16          I don't think you're going to see the roads.  
17          The intervening vegetation will hide the roads  
18          and the clearings.

19   Q.    Your methodology is to first determine the  
20          visual effect, and then to determine the viewer  
21          effect, for using shorthand, is that correct?

22   A.    Yes.

23   Q.    Okay. But you only determine the viewer effect  
24          with respect to resources that scored moderate

[WITNESS: Raphael]

1 to high on your first phase, correct?

2 A. Correct.

3 Q. So, you only -- so, that meant only Willard  
4 Pond?

5 A. Right.

6 Q. Why do you not do a viewer effect analysis on  
7 something that might have a moderate, as  
8 opposed to a moderate/high visual effect?

9 A. Well, because, under the methodology, the  
10 moderate effect doesn't, you know, we're  
11 looking for high effect, unreasonable effect,  
12 and the moderate doesn't get you there. So,  
13 the way we design the -- and the way that it's  
14 typically done, is that, again, you walk  
15 through the process and you leave the viewer  
16 effect as the last piece of the analysis. And,  
17 as we employed the methodology, if those  
18 resources didn't get to a moderate to high or  
19 high, there was no need to further analyze them  
20 for viewer effect, because that threshold  
21 wouldn't occur.

22 Q. But that's my question, is why that threshold?  
23 Why isn't the threshold the moderate effect, as  
24 opposed to moderate-high? Why is that the

[WITNESS: Raphael]

1 threshold that's chosen?

2 A. I think that we kind of base it on a reasonable  
3 definition of "moderate". I mean, you know, if  
4 you think of a project in moderation and a  
5 moderate effect itself, that does not rise to a  
6 level of great concern, typically. It means  
7 that, you know, the effect is moderate, and it  
8 is mediated by other factors in the landscape.  
9 Whether it's, you know, distance or the  
10 context, you know, how many are in view, those  
11 types of things. So, we have to have a  
12 threshold whereby we move ahead with the last  
13 step -- the last two steps of the analysis.

14 If we analyzed, you know, moderate  
15 effects, we would probably have a much broader  
16 net with which to work to -- work from. And,  
17 really, I think what we're trying to do is get  
18 to the most sensitive resources and the  
19 greatest potential for effect. And that's why  
20 we consider the moderate-high to be that  
21 threshold, versus the moderate.

22 Q. Well, would it be possible for a resource to  
23 have a moderate visual effect, but a higher  
24 viewer effect?

[WITNESS: Raphael]

1 A. That would be something we'd probably be aware  
2 of as we went through our inventory process.  
3 And, therefore, it could inform the potential  
4 to assess it under all criteria.

5 Q. And how would you tell us about that, if you  
6 found that to be the case with any -- with  
7 respect to any particular resource?

8 A. I think it would be identified as part of the  
9 narrative and in specific reference to that  
10 resource.

11 Q. And, with respect to this particular Project,  
12 are you aware of any of the resources that fit  
13 that definition, where they may have a moderate  
14 visual impact on the scenic resource, but a  
15 higher viewer effect, other -- obviously,  
16 you've analyzed Willard Pond, but other than  
17 Willard Pond?

18 A. No.

19 Q. And, finally, my last series of questions is  
20 about this question that Commissioner Rose  
21 raised, about the nature of the experience from  
22 other aspects, not necessarily scenic.

23 And I guess my question to you is, if  
24 there is something about something, as you say,

[WITNESS: Raphael]

1 "unique" or "special" about a particular  
2 resource, it doesn't have to do with its scenic  
3 quality, does that -- does that suggest that  
4 people are less likely to care about the scenic  
5 quality or more likely to care about the scenic  
6 quality? Or can we tell?

7 A. Well, it depends on what you're describing as  
8 "unique", okay? So, you know, one day I saw  
9 somebody diving there. And maybe that's a  
10 unique place to dive, because there could be  
11 something unusual or one-of-its-kind on the  
12 lakebed or the pond bed. I would say that  
13 would be a type of activity where scenic values  
14 didn't really matter to that individual in that  
15 activity. So, I think --

16 Q. It kind of don't matter by definition --

17 *[Court reporter interruption.]*

18 MR. IACOPINO: I'm sorry.

19 BY MR. IACOPINO:

20 Q. They kind of don't matter by definition, in  
21 that case, --

22 A. Yes.

23 Q. -- unless you're talking about underwater  
24 scenery.

[WITNESS: Raphael]

1 A. Right. Right.

2 Q. But let's just -- let's focus on things that  
3 you've actually mentioned, fishing, kayaking,  
4 things like that.

5 A. Sure.

6 Q. If there's a resource that has -- is special or  
7 unique for those purposes, is that something  
8 that will make the scenic quality less  
9 important or more important, to the viewer?

10 A. I think it depends on the viewer's perspective.  
11 For some, it might; for others, it might not.  
12 And I don't mean to be equivocal about that  
13 answer, but that's -- because I know, for  
14 example, you know, let's take -- let's take  
15 hiking. You know, I know a lot of people who  
16 hike for the athleticism of it and to achieve  
17 certain goals. And, you know, there's -- I  
18 know, and I don't know how many, you know,  
19 there are 46 summits over 4,000 feet in New  
20 Hampshire. And I know there are -- is it 44 or  
21 46?

22 Q. Forty-eight.

23 FROM THE FLOOR: Forty-eight.

24 WITNESS RAPHAEL: Forty-eight.

[WITNESS: Raphael]

1 Excuse me. Oh, man.

2 *(Multiple parties speaking at*  
3 *the same time.)*

4 WITNESS RAPHAEL: I might be  
5 confusing that with the Adirondacks. I know  
6 there are only four in Vermont, but -- or five,  
7 but anyways.

8 **CONTINUED BY THE WITNESS:**

9 A. But, to that point, that's, you know, I've seen  
10 a number of people who are engaged in that  
11 particular type of hiking who literally get to  
12 the summit and turn around and go down. And,  
13 so, for them, the scenic values are less  
14 important than the achievement and bagging that  
15 peak. So, that would be an example.

16 BY MR. IACOPINO:

17 Q. So, it would be fair to conclude then that  
18 there's really no consistent way to measure  
19 that, that it always depends on the individual?

20 A. And I think it depends on the nature of the  
21 resource, too. So, yes. I would agree with  
22 you that it's hard to measure that.

23 MR. IACOPINO: Thank you. I have no  
24 other questions.

[WITNESS: Raphael]

1 PRESIDING OFCR. SCOTT: Attorney  
2 Needleman, do you have redirect?

3 MR. NEEDLEMAN: I do. Thank you.

4 Mr. Raphael, I will personally  
5 confirm there are 46 in the Adirondacks. I've  
6 climbed them many times.

7 WITNESS RAPHAEL: And, as you know,  
8 I'm not -- they're not all on my list.

9 MR. NEEDLEMAN: I do know that.

10 **REDIRECT EXAMINATION**

11 BY MR. NEEDLEMAN:

12 Q. I want to start with some questions that Mr.  
13 Block asked you a while back. He put  
14 Non-Abutters Exhibit 17 in front of you, and  
15 there were two parts to that. The first part  
16 was a list of resources that Mr. Block  
17 identified in one of his data requests that he  
18 alleges that you didn't consider. Did you have  
19 a chance to take a look at that list?

20 A. Yes.

21 Q. And is it correct that you did not consider the  
22 resources on that list?

23 A. No.

24 Q. I don't want to go through all of them, I want

[WITNESS: Raphael]

1 to give some examples. So, with places like  
2 Holt Hill and Windsor Mountain, which are on  
3 that list, do those places have any designated  
4 public access?

5 A. No.

6 Q. Are they identified as a scenic resource in any  
7 material that you were able to locate?

8 A. No.

9 Q. Are they part of any conservation areas or  
10 easements?

11 A. Not that I'm aware of.

12 Q. So, you did evaluate them, but, for those  
13 reasons, they didn't end up going further in  
14 your analysis, is that right?

15 A. That's correct.

16 Q. And there are actually a series of resources by  
17 way of other examples that Mr. Block identified  
18 in that exhibit, which you specifically speak  
19 to in your VIA, if I'm correct. So, for  
20 example, I'm looking at Page 55 of your VIA,  
21 Resource Number 145. This is "The Common  
22 Pathway". This runs parallel to Route 202, in  
23 Peterborough, which is one of the resources  
24 that Mr. Block indicated you didn't assess.

[WITNESS: Raphael]

1 And, in fact, you did an assessment from this  
2 area, is that right?

3 A. That's correct.

4 Q. Or it's on your inventory?

5 A. Yes.

6 Q. Page 50 -- actually, let's go to Page 51,  
7 Resource Number 40, that's part of the -- you  
8 identified the "Monadnock Region Loop". Mr.  
9 Block indicated that he thought you didn't  
10 identify or assess Route 123, in Stoddard. But  
11 that is part of that Loop, isn't it?

12 A. That is correct.

13 Q. Resource Number 147, on Page 55, would be  
14 another example. Mr. Block was concerned about  
15 your perceived failure to identify Bacon Ledge.  
16 But, in fact, you indicate that you hiked there  
17 on the Trout-n-Bacon Trail and found no  
18 visibility, is that right?

19 A. That's correct.

20 Q. All right. And there others on that list as  
21 well, am I correct?

22 A. Yes, you are.

23 Q. Mr. Block's second criticism of you I think  
24 involved the next page of his exhibit, where he

[WITNESS: Raphael]

1           said that there were a series of resources that  
2           you improperly "screened out" from your  
3           assessment, is that right?

4   A.   That's right.

5   Q.   And is he correct that you "screened resources  
6           out" without giving them adequate  
7           consideration?

8   A.   No.   That's not correct.

9   Q.   Just to be clear, and we've gone through this a  
10          couple of times, but I'm not sure it's crystal  
11          clear in everyone's mind, the first step in  
12          your analysis is the viewshed mapping, which is  
13          your initial screening tool for visibility, is  
14          that right?

15  A.   Yes.

16  Q.   But do you ever dismiss a resource at that  
17          point, without doing further analysis of it?

18  A.   No.

19  Q.   So, that further analysis would constitute  
20          things like additional desktop analysis for all  
21          resources, it would involve aerial photography,  
22          3D modeling, things like that?

23  A.   Yes.

24  Q.   And, if there's still any question about

[WITNESS: Raphael]

1 visibility after that type of additional  
2 screening, you visit the resource, is that  
3 right?

4 A. That's correct.

5 Q. And, so, again, looking at Page 55 of your VIA,  
6 which is the Trout-n-Bacon Trail, Resource  
7 Number 147. In Footnote 73, you actually  
8 indicate that you "confirmed no visibility  
9 based on a field visit"?

10 A. That's correct.

11 Q. And, in fact, if you scan those footnotes,  
12 there are a lot of resources that you confirmed  
13 "no visibility through a field visit"?

14 A. That's correct.

15 Q. Okay. When Mr. Reimers was questioning you,  
16 one of the issues that he went back to several  
17 times was the issue of whether or not you  
18 properly employed the standard in the SEC  
19 regulations about a "typical" --

20 *[Court reporter interruption.]*

21 BY MR. NEEDLEMAN:

22 Q. -- a "typical viewer" versus a "reasonable  
23 viewer". Do you recall that?

24 A. I do.

[WITNESS: Raphael]

1 Q. And you pointed out a place in your VIA where  
2 you use those terms interchangeably. And I  
3 think your testimony was that it was your  
4 intention to use those terms interchangeably,  
5 is that right?

6 A. That's correct.

7 Q. I just want to go to your testimony, your  
8 initial testimony, at Page 8. And the question  
9 is asked "What are your conclusions regarding  
10 the potential visual effect of the Project?"  
11 So, this is -- this is the ultimate conclusion  
12 regarding visual effects, after going through  
13 the entire analysis, correct?

14 A. That is correct.

15 Q. And, as part of your description of rendering  
16 that ultimate conclusion, on Line 19 you  
17 specifically use the phrase "typical user's  
18 appreciation"?

19 A. That's correct.

20 Q. And, again, on Line 20, you use "typical user  
21 interests". Correct?

22 A. Yes, I did.

23 Q. So, just to be clear, you were using those  
24 words "typical", as in the regulation, and

[WITNESS: Raphael]

1 "reasonable" interchangeably for purposes of  
2 your analysis?

3 A. Yes, I was.

4 Q. I would ask you to look at your supplemental  
5 testimony, on Page 5, if you could. Earlier  
6 today, Ms. Maloney was questioning you about  
7 the criticisms that you had regarding  
8 Ms. Connelly's use of viewer panels. And you  
9 are not criticizing the use of a viewer panel,  
10 *per se*, to do an assessment, are you?

11 A. No.

12 Q. But you are criticizing the way in which she  
13 went about using viewer panels, is that right?

14 A. Yes.

15 Q. And can you read the first sentence of Footnote  
16 Number 1 on Page 5. And, first of all, can you  
17 identify where this citation is coming from?

18 A. Sure. It's "BLM Manual 8431 Visual Resource  
19 Contrast Rating, Page 3".

20 Q. And, just to be clear, this is the Bureau of  
21 Land Management Manual that provides guidance  
22 on how one should implement the BLM  
23 methodology, is that right?

24 A. That's correct.

[WITNESS: Raphael]

1 Q. And the evaluation sheets that Ms. Connelly  
2 provided to her viewer panels, as we will hear  
3 later when she testifies, were based on the BLM  
4 sheets that are used by the Bureau of Land  
5 Management, is that right?

6 A. That is right.

7 Q. Could you read that first sentence.

8 A. Sure. And this is a quote from the Manual  
9 itself: "The actual rating should be completed  
10 in the field from the KOPs", which is "key  
11 observation points". "It can be done as a team  
12 effort or individually, depending on the  
13 sensitivity and impacts of the project and the  
14 availability of personnel."

15 Q. Okay. So, your point being that at least this  
16 BLM guidance document encourages the raters to  
17 do those ratings from the field?

18 A. That's correct.

19 Q. Now, I want to turn to your VIA at Page 61.  
20 Ms. Maloney, during her first day of examining  
21 you, spent a lot of time on the issue of  
22 "cultural designation". And, if you go to  
23 Page 62, that's where your chart begins where  
24 you went through an assessment of various

[WITNESS: Raphael]

1 resources that you looked at in order to assist  
2 with your cultural assessments of resources.

3 Is that right?

4 A. That is.

5 Q. And I think perhaps people were left with the  
6 impression that, if you look at your table, and  
7 you go across the top, you get to a maroon  
8 colored column that says "total".

9 A. Correct.

10 Q. And the number in that column was your total  
11 number of times that one of these periodicals  
12 or websites, or whatever it may be, mentioned  
13 the particular resource that you were focusing  
14 on, is that correct?

15 A. That is correct.

16 Q. Now, do you use that total number in any way to  
17 translate into a cultural designation of high,  
18 medium or low?

19 A. It informed our translation. But, no, we  
20 didn't rely on that number.

21 Q. So, if there was a zero in that column, that  
22 didn't mean that it was a low cultural  
23 designation?

24 A. No.

[WITNESS: Raphael]

1 Q. So, I want to look at some examples of that.  
2 Could you go to Page 64 of your VIA. Now, I'm  
3 looking at Resource Number 11. That is the  
4 "Hedgehog Mountain Summit Scenic Viewshed".  
5 And, for that Resource Number 11, the total  
6 number of places where it was identified on  
7 this chart was "zero", is that correct?

8 A. That is correct.

9 Q. And, then, go to Page 68 please. Page 68 is  
10 now your overall cultural ratings of this  
11 resource. And, if we look at "Hedgehog  
12 Mountain Summit Scenic Viewshed", despite  
13 getting a zero on that chart, it received a  
14 cultural designation of "high", correct?

15 A. That is correct.

16 Q. Can you explain why that is?

17 A. Yes. There are at least two reasons why that  
18 is. One is, it is a scenic resource, and is  
19 identified as that specifically. And it is,  
20 from our review of local materials and sources,  
21 it was identified. And, therefore, the  
22 combination of its identification in local  
23 resources that we reviewed, in addition to the  
24 books and websites on the previous table, as

[WITNESS: Raphael]

1 well as the fact that it is identified as a  
2 "scenic resource", translated into a high  
3 ranking for that cultural designation.

4 Q. Now, there are other resources that ended up in  
5 exactly the same situation as Hedgehog. For  
6 example, Resource Number 9, Muzzy Hill --

7 *[Court reporter interruption.]*

8 BY MR. NEEDLEMAN:

9 Q. Muzzy, M-u-z-z-y, Muzzy Hill Road, and Resource  
10 Number 10, Clark Summit Scenic Viewshed, also  
11 got "zeros" on that chart, but "high" cultural  
12 designations, is that right?

13 A. That is right.

14 Q. So, and then, looking at Bald Mountain, for  
15 example, if you look at Page 65, Bald Mountain,  
16 I believe, got a tally on that chart of "5"  
17 different hits, is that correct?

18 A. That is correct.

19 Q. Yet, on Page 68, despite all those hits, the  
20 cultural designation of Bald Mountain ended up,  
21 Resource Number 16, ended up being "moderate".  
22 Can you explain that?

23 A. Well, the primary reason for that is that there  
24 was no scenic designations specifically

[WITNESS: Raphael]

1 attached to the Bald Mountain trails and  
2 resource.

3 Q. So, your cultural assessment, for places like  
4 Hedgehog and all of those other resources here,  
5 including Willard Pond, was ultimately informed  
6 by the exact kind of local information that  
7 Ms. Maloney pointed to you and went through in  
8 her exhibits, is that right?

9 A. That is right.

10 Q. And, if we turn to Page 133, I believe, of your  
11 VIA. Actually, I'm not sure it's 133. I'm  
12 looking at your bibliography.

13 A. Okay. That would -- in mine, it's 134.

14 Q. Okay. Your bibliography lists over 100  
15 different resources, is that correct?

16 A. Correct.

17 Q. And those are things like newspaper articles,  
18 environmental and conservation group websites  
19 and blog posts, and local and municipal  
20 documents, among other things, is that right?

21 A. That is right.

22 Q. So, now, I want to ask you to -- sorry for all  
23 the bouncing around -- I want to ask you to go  
24 to Page 61 of your VIA. And this, again, is a

[WITNESS: Raphael]

1 recap of your cultural designation methodology.  
2 And there's a small paragraph on the bottom of  
3 Page 61. Can you just read the first line?  
4 A. Certainly.  
5 Q. Begins "In addition".  
6 A. "In addition to reviewing relevant municipal  
7 and regional planning documents, twenty (20)  
8 different guidebooks, books, publications, and  
9 websites of statewide and national appeal were  
10 evaluated to see if any of the 30 resources  
11 were identified as possible destinations."  
12 Q. Okay. So, when you say "20 different  
13 guidebooks", *etcetera*, those 20 are the ones  
14 that are summarized on the chart on Page 61 to  
15 65, is that right?  
16 A. That's correct.  
17 Q. And, then, when you say "in addition to  
18 reviewing relevant municipal and regional  
19 documents", those are the ones in your  
20 bibliography, is that correct?  
21 A. Correct.  
22 Q. And those are all the additional ones that  
23 informed your view for places like Hedgehog and  
24 Clark summit, *etcetera*?

[WITNESS: Raphael]

1 A. Right. And, as the bibliography shows, it  
2 wasn't just confined to just official municipal  
3 and regional planning documents or other sites  
4 that we researched and looked for references.

5 Q. One last set of questions. If you could turn  
6 to Page 23 of your VIA. This is the "Angle of  
7 View". And you will recall that Ms. Maloney  
8 asked you some questions about angle of view,  
9 and asked you I think to acknowledge that the  
10 human eye only sees in a field of 40 to  
11 60 degrees, and implied that, therefore, by you  
12 using a broader angle of view in your  
13 assessment, that was not an appropriate  
14 approach. Do you recall that?

15 A. Right.

16 Q. And you didn't have a chance to explain at the  
17 time, I think, why you disagreed with her  
18 limiting of that. Could you explain that now.

19 A. Sure. So, we look at the angle of view  
20 relative to how much is visible in that angle  
21 of view, but we base the percentages on what  
22 you can actually see in the cone of vision of,  
23 you know, 40 to 60 degrees. So, when -- so, we  
24 start with that percentage and assess how much

[WITNESS: Raphael]

1 of the angle of view is occupied by, I mean,  
2 how much of the Project is occupied within that  
3 angle of view, and then we apply that to the  
4 broader panorama to put it in that perspective  
5 as well.

6 But the angle of view and the rankings or  
7 the thresholds are based on the 60-degree view  
8 and the amount of that view that the Project  
9 occupies.

10 Q. So, one last time, I'm going to ask you to jump  
11 to Page 84. These are now sort of summary of  
12 your angle of view ratings. And, so, just to  
13 be clear, in order to achieve a "high" rating  
14 in your methodology under angle of view, you  
15 don't have to have anything close to a  
16 360-degree view of the Project, is that right?

17 A. Oh, not at all.

18 Q. In fact, if 21 percent or more of the field of  
19 view is occupied, that's "high" on your chart,  
20 is that right?

21 A. That's correct.

22 Q. So, getting back then to this disagreement  
23 between you and Ms. Maloney about how to apply  
24 angle of view, if you did it the way

[WITNESS: Raphael]

1 Ms. Maloney was arguing, would that approach be  
2 one that is generally accepted in your  
3 profession?

4 A. No.

5 Q. Would it produce results that you would believe  
6 are accurate?

7 A. No.

8 Q. And, conversely, is the approach that you used  
9 here one that is generally accepted in your  
10 profession?

11 A. Yes.

12 Q. And do you believe that these, in fact, produce  
13 accurate results?

14 A. Indeed, I do.

15 MR. NEEDLEMAN: Thank you. No  
16 further questions.

17 PRESIDING OFCR. SCOTT: Okay. Well,  
18 we'll break for lunch. So, go off the record.

19 (Lunch recess taken at 12:16  
20 p.m. and concludes the **Day 6**  
21 **Morning Session**. The hearing  
22 continues under separate cover  
23 in the transcript noted as **Day 6**  
24 **Afternoon Session ONLY**.)

{SEC 2015-02} [Day 6/Morning Session ONLY] {09-28-16}